

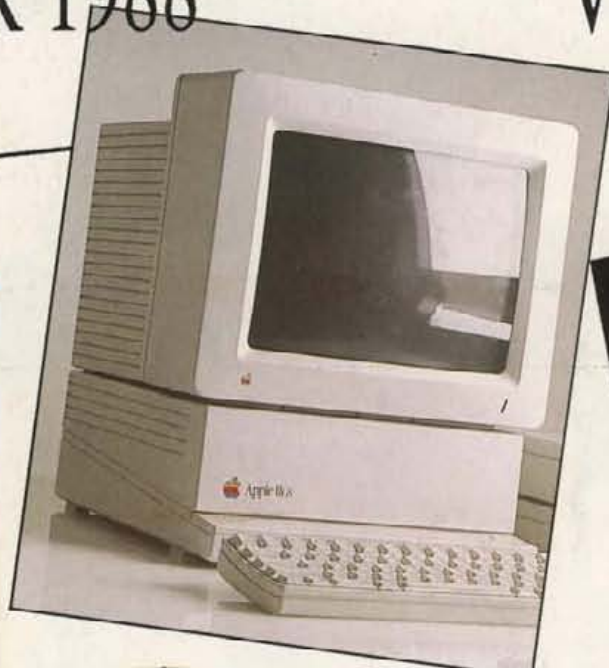
# Apple2000

THE NATIONAL APPLE USERS GROUP



DECEMBER 1988

VOLUME 3(6)



The Editors of Apple2000 magazine  
Wish everyone a Merry Christmas  
and a Prosperous New Year  
and look forward to an  
exciting future...



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### There are a number of ways to contact Apple2000.

Force users who have a query about the service can contact the administrator, John Lee, directly for help and advice. Call him on the number opposite or send a message to his box on the Force.

If you wish to order goods or services from Apple2000, call Irene on 051 928 4143 or (during office hours) call Alison on 051 928 4143. Both have Ansafones, in case they're not around. Alternatively you can Fax. to 051 929 0307, write to the PO Box or (if you use comms) you can leave orders on TABBS addressed to the SYSOP.

If you are experiencing problems with Apple hardware or software Dave Ward runs the Hotline and will get you out of the mire.

We are very interested in the activities of local user groups, and if you have any information which you would like publicised John Lee would like to hear from you.

Moans and Groans - We don't get many of these, but Mick Knapp has broad shoulders (and stomach, and thighs...) so send these to him via the PO Box.

A little praise for a few of our authors wouldn't go amiss. Send all comments via the PO box, especially suggestions about what you would like to see in **your** magazine.

**Apple2000** supports users of all the Apple computers, from the IIT 2020, through the I, II, II+, //e, //c, IIGs, ///, Lisa, XL, Mac 128, 512 MacPlus, SE, Mac II and IIX

Contributions and articles for the magazine are always welcome. We can handle any disk size or format. Please send to the PO Box, L21 8PY.

#### NOTE:

In general the front half of the magazine is for the Apple II, Apple IIGs and Apple ///. The back half of the magazine is mainly for the Macintosh and Lisa. Look out for the descriptive page icons.

#### Key:

Apple II, //e and //c  
Apple IIGs  
Macintosh, Lisa  
Macintosh II



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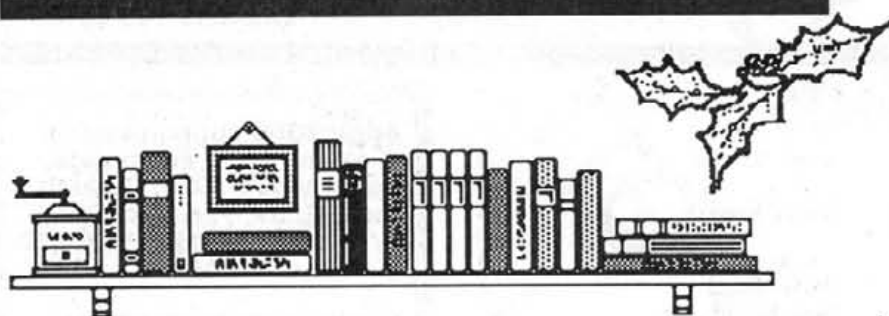
Ewen Wannop - SYSOP  
Modem 051 928 4143

#### Local Groups

John Lee  
051 928 4143



# Editorial Shelf



Those that visited the Mac User show last November will know what a huge success it was. Not only as the largest exhibition ever held in the UK devoted entirely to the Apple computer, but for the interest that was aroused by the Apple2000 stand.

It seemed throughout the three days that a never ending procession came to our stand. Most of those who came stopped to see what we had to offer, and many of them as a result joined us on the spot. With such a success, the membership level has now risen dramatically.

We therefore give a very big welcome to all the new members and hope that you will enjoy your stay with us. I also hope that you will become involved with our many activities over and above the reading of this magazine!

I must also say a big thank you to all those members who helped us on the stand at the show. We could not have survived the three days without them.

Although there were not many earthshattering new products at the show that we had not heard about before, it was clear that

the Macintosh has finally broken through into the corporate market, not only because of its DTP capability but simply for its friendliness and power.

Almost every one I talked to was using a Macintosh already, only two of them were not, and they were feeling the draught terribly! Most had only had their systems for a few weeks, and were now looking for help in making the fullest use of them. Our biggest selling point at the show in getting these people to join Apple2000, was the great expertise that lies within the membership.

Help us to help them. You can do this in many ways. If you can write, let us know about your own experiences, or write about your favourite piece of software. Go along to a local group and give your knowledge to others directly. If you are expert at some aspect of the Apple, let Dave Ward at the hotline know about it, he can then add you to his list of experts.

I wish you all a very merry Christmas and a prosperous New Year.

**The Editor**



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Ring John Lee on (0373) 84861 for details of **The FORCE**.

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## The Editorial team is:

### Apple II

Ewen Wannop  
Mick Knapp

### Macintosh

Norah Arnold  
Irene Flaxman

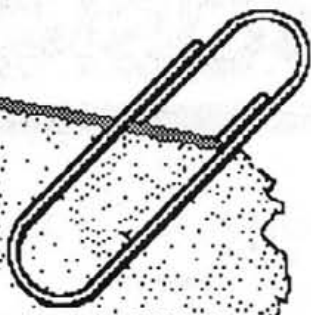
Many thanks to all those who work behind the scenes and who receive no personal credit. These people are the stalwarts of Apple2000.

Additional thanks to Walter Lewis of Old Roan Press (0151-237-4811) for our printing service, and to Ian Sharp of Sharp Studios (0151-237-2788) for our cover design. (Graphics for the cover design supplied by Apple Computer UK Ltd, Adobe Systems Inc., Cricket Software.)

Apple2000 are Founder Members and Whole-hearted Supporters of the  
**Apple User Group Council**



# Letter Box



34 Macintosh Show  
35 Macintosh  
36 Macintosh  
37 Macintosh

To All Apple2000 members

Just a short note to urge all members of Apple2000 to support the couple of Apple II suppliers that are left. Otherwise we will find ourselves with a lack of hardware rather like the lack of reading material we now find ourselves with (or without!). Thank goodness for Apple2000!

I would like through the pages of our journal to extend a special thanks to Holdens Computer Services who have over the past months been most helpful and indeed saved me a considerable amount of money on a problem I recently had with an ImageWriter II SheetFeeder.

On the subject of that particular SheetFeeder a warning to all owners of such. When folding up the front half of the the SheetFeeder do this with extreme care as anything more than a gentle pressure may cause one of the small plastic hinges to break and I am led to believe that repair will cost in the region of £100. Be Warned!

PS Does anyone want to swap their Platinum ImageWriter II SheetFeeder for an almost new White one that I have?

Paul Warwick



Berthold Instruments (UK) Ltd  
35 High Street  
Sandridge  
St Albans  
Hertfordshire  
AL4 9DD  
(0727) 41999

Dear Sirs,

My company still maintains and services a large number of Apple systems which are installed and used at our customers' premises.

We are having great difficulty in purchasing replacement Titan Accelerator cards at the present time and would be grateful if you could let us know of any companies that still sell these cards.

JW Newell

□ The Titan card is now obsolete, and as far as I know there are none to be had on the open market. If anyone knows of any quantities of these, please can they get in touch with Mr Newell.

If these machines are //e's, then the alternative TransWarp accelerator card or Zip chip would fit the bill. If they are II+'s then the Zip chip is called for. See the review in the October issue for further details.

Ewen Wannop



5 Old Hall Drive  
Wharfedale  
Cumbria  
LA2 7DG

To:  
The Managing Director - Microsoft UK  
Ltd  
Excel House  
49 De Montfort Road  
Reading  
Berks  
RG1 8LP

Copies to Microsoft International,  
Apple Computer UK, The Macintosh  
User Group, Apple2000, MacTel,  
MacUser, Apple Business

Dear Sir,

I have just purchased Microsoft Word for my word processing requirements and would like an explanation of your companies attitude to me as a user.

Firstly, please justify your pricing policy in the UK taking into account the current exchange rate between \$ and £.

Secondly, please justify the fact that after paying an inflated price for the UK version of the product, I am given an outdated version which does not support the Apple printer I use - namely the ImageWriter LQ. This printer has been available for some time and it is my understanding that the US version of Word does support the LQ, in fact I have been offered an 'upgrade' to the cheaper (and presumably unlocalised (spelt with an s in my dictionary, with a z in yours)) US version to get round the problems

with the LQ. I do not consider it reasonable to have to perform a shift-page setup and shift-print commands every time I open a document because the developer decided not to use the device independent drivers properly (note that not one other product that I have tried has had any problems with this printer).

Thirdly, it has been a standard guideline for some time NOT to ship software with a System Folder as system files have been machine specific since the launch of the SE more than 1 1/2 years ago, yet Word is shipped with what I assume to be a Macintosh Plus System (since no mention is made anywhere in the documentation of any more recent machine). Whilst this may be convenient for Macintosh Plus owners, it is potentially damaging to users of later machines who follow instructions which clearly expect the system on the program disk to be used.

Fourthly, several serious bugs remain. When using boxed paragraphs or vertical line tabs, gaps are frequently present in the vertical lines and the line can change thickness depending on the font/size of the text on the line. This has been observed on a LaserWriter as well as on the LQ showing this to be an old problem which should have been cured long ago, especially in a product which is sold partly on it's "professional-quality output".

Fifthly, I consider the numeric keypad to be just that and have always toggled it back to being so from the IBM-PC style usage chosen by yourselves as most of my work is of a technical nature. I now find that when I do this I lose the page number and other information that normally appears in the bottom left of the window and the cursor keys no longer function correctly. I trust you have a fix for the error.

Lastly, I note that your faith in the product is such that your license agreement specifically excludes any warranty that the product does anything whatsoever related to what it is claimed to do.

I await your reply to these points,  
SN Hobson

□ If Simon will send us any replies he has got to this letter, we will gladly publish them.

It is not unusual for 'bugs' to pass the stringent testing that any developer undertakes before releasing a product. But these bugs should be cleared up as they are notified, and put right in subsequent releases. Word has had well documented bugs for some time. It is disgusting that they should continue to proliferate and not be corrected.

What confidence does it give us in the products of such a large company. Let me have your comments for the next issue.

Ewen Wannop



# Micol Basic

## A new review of the compiled Basic by Barry Keal

### Introduction

Micol BASIC is supplied on a single floppy disk, not copy protected, running under Apple's PRODOS format. It comes complete with a spiral bound manual running to over 250 pages complete with table of contents, index and addendum. It is unfortunate that the index always seems to be before the addendum because it makes it harder to refer to it quickly but I suppose after a while one gets used to it.

The manual gives a background to the compiler, the advantages and disadvantages of compiled languages compared to interpreted versions and hand coded assembly language. A brief section then follows explaining the merits of structured programming and the facilities offered by Micol BASIC in this direction.

The instructions on how to actually edit the program, compile, link and execute it are, generally, quite comprehensive. Tutorials and examples are given where appropriate.

Program source code is stored as a text file on disk and Applesoft programs can be edited if they are first converted to a text file instead of the usual tokenised binary format. All Applesoft programs will need to be converted in at least one way before compilation (see compiler options below).

The manual then proceeds with the description of the data types available, the differences between Applesoft and Micol BASIC including disk file maintenance and some of the error messages generated.

### Why Compile?

Compiled programs are invariably faster than their interpreted counterpart. They are not, however, as fast as well written assembly language. It is frequently more convenient to use a high level language than a low level one. It is also more easily transferred to a different machine.

There is always a trade off between the time taken to write a program (and debug it) and the speed of execution. The easier it is to write the program (eg in a high level interpreted language) the slower it will run. This is true of Micol BASIC, as with every other language I have used.

Micol is particularly superior to Applesoft when using integer arithmetic; Applesoft converts all integers to real numbers before calculating making integers even slower than floating point numbers.

Do not expect every program to be faster though. If your creation has a lot of disk, keyboard and screen accessing then the improvement will be slight. This is due to the restriction the peripheral imposes on the rate of execution. For pure calculation and data manipulation the improvement can be in the order of twenty-fold.

### The Editor

After using Appleworks, Applesoft and Apple Pascal it took me a while to get used to the idiosyncrasies of the Micol Editor. However there are some useful features available and one or two extras that would have been nice to see built in. For example there is a hexadecimal to decimal (and vice versa)

converter but no built in renumber facility.

The editor is line based and offers an auto line numbering option with user definable start and increment parameters. For Apple II+ users the missing characters can be produced from the keyboard by using control key combinations for example the underscore is control A. The cursor is non-destructive, ie it does not delete text to the right of itself when return is pressed. The maximum length of a line is 250 characters and statements can be split up with the standard BASIC colon delimiter.

Deletion of lines is simplicity in itself. Single lines or a range of lines can be specified and prior to deletion you are prompted to confirm the operation.

Some disk operations can be carried out from the editor command line including locking and unlocking of files, setting the default prefix (necessary on a hard or ram disk with subdirectories), deleting files, catalogs and, of course, loading and saving your source.

Incidentally, typing in LOAD without a file name having been used previously causes unexpected errors and garbage on the screen. This was one of several things that annoyed me. A simple check to see if the filename had been entered is all that is needed but seemed to be missing.

There is a find facility and a search and replace option in the editor. It is not something I use very often but it is nice to know it is there.

A copy or move facility would have been nice along with a full screen editor for the //e (preferably with Appleworks key commands) still we can't have everything (or can we?).

### Compiling and Linking

Having created your masterpiece the time finally arrives when you have to compile it. There are two possible ways of invoking the compiler.

The first through the main startup menu, the second is from the editorcommand line. If you invoke the compiler from the editor it will prompt you to



save the source file. This is because the compiler overwrites the text buffer and editor.

The compiler requires that the first line of the program contains PROGRAM progname, failure to include this terminates the compilation. I get the impression that the author of Micol BASIC is a Pascal programmer at heart, see the section on procedures for further confirmation.

If an error is found, the compiler suspends the compilation and displays the error message. You are then given the option of continuing or cancelling the compilation. If you choose to cancel and then enter the editor to correct the source you are often taken to the line with the error, though not always.

Linking the program merely requires the linker to be invoked. It will then prompt for the file name.

The compilation and linking can be automated by selecting RUN from the editor and, after successfully compiling and linking, the runtime library will be loaded and the program executed.

### Compiler Directives

The compiler has, as one would expect, a number of directives that will alter the usual compilation procedure. They appear at the start of the program and must be preceded by an @ sign. They offer the following options:

**CHAIN** To load and execute a second program, sharing variables.

**CODE** Displays the assembly language generated by the compiler.

**ERROR** Allows the use of ON ERROR RESUME. Generates 13 extra bytes per line of source.

**LINE** Causes the compiler to generate line numbers in the output stream. Without this option the code is more compact but all runtime errors point to line zero.

**LIST** Displays line numbers, relative lexical level, the address in memory of the line and the text of it.

**NOGOTO** Makes GOTO illegal.

**PRINTER** As list but to the printer.

**QUICK** Generates faster

code at the expense of greater object file size.

**VAR2** Renders only the first two characters of a variable name significant (like Applesoft).  
**HIMEM LOMEM** As Applesoft

### Data Types

In addition to real and string variables, Micol BASIC offers both genuine integer variables and boolean (true/false) data types. The use of proper integers and separate integer routines in the runtime library make the code execute much faster.

You must watch that you don't mix real and integer types if you want a fast program, not because it is illegal to do so but because there is an overhead in converting from one to the other. The manual makes this clear and explains the correct procedure for maximum efficiency.

All the simple data types can be used in arrays, the use of arrays is the same as in Applesoft with the exception that they can not be dynamically dimensioned at runtime (it is bad programming practice to do that anyway).

### Additional Instructions

There are a number of additional commands and functions that are not included in Applesoft. Unless otherwise stated commands and functions are the same as Applesoft. They are:

**BELL** Beep the speaker.

**DELAY** Wastes time (like a dummy For Next loop)

**DISPLAY** Shows when a simple variable changes value (for debugging).

**PRTON** Turn on printer.

**SCRN40)**

**SCRN80)** Change from 40 column to 80 column screen or back again.

**INDEX** Locate a substring in a string.

**GOSUB** This can be to a line number or named subroutine.

**IF THEN)** Multiple line if-then constructs are supported along with the ELSE statement.

**ELSE )**

**ENDIF )**

**ROUTINE** Allows a subroutine to be called by name instead of line number.

**PERFORM UNTIL** Repeatedly call a subroutine until a condition is satisfied.

**WHILE WEND )** Structured loop control facilities.  
**REPEAT UNTIL)**

**FOR NEXT UNTIL** For next loop. It is not permitted to change the loop counter to force an early exit, the UNTIL will give a graceful exit.

**PROC ENDPROC** Very similar to Pascal procedures but variable parameter passing is limited to the call and not passed back on the return. Variables declared inside the procedure block are local by default.

**PRINT USING** This allows the easy formatting of numerical information and can be customised to use leading pound signs (or other currency symbols) as opposed to the default dollar sign.

### Disk File Handling

Applesoft's disk handling is completely changed, thank goodness. It is now possible to have more than one file active simultaneously for reading and writing in addition to the screen and printer. The use of control D is not required any more thus file handling is much more friendly. Logical files are used to communicate to the physical file making the program easier to write and debug.

### Conclusion

All in all, I was very impressed with Micol BASIC. I am a devout fan of the Apple Pascal 1.3 system, in particular programming in Pascal.

I found the transition back to BASIC to be greatly enhanced by the additional features offered which gives the programmer some of the control structures and facilities of the "superior" (?) structured languages.

Micol allows the calling of assembly language routines via the CALL, & hook and USR(X) options in the same way as Applesoft.

In view of Apple's reported decision to stop supporting Pascal 1.3 and the general lack of software that runs under P-system I have decided to switch to PRODOS based languages.

I am tempted to go for Micol BASIC, which is slightly faster than Pascal 1.3, and convert my applications to PRODOS. I would, however, like to compare ZBASIC against Micol BASIC because of the double hi-res support (it is reported to be faster than Micol as well). I hope to do a review of ZBASIC in the near future.

My thanks must go to Apple 2000, and Irene Flaxman in particular, for the loan of the system. It is available from the Apple 2000 shop price £59.80.

Barry Keal



## The Boffin Answers ....

7 St Wimpole's Way  
Highgate near Bedford  
East Sussex  
MK15 2RS

Dear Boffin,

I have an Apple IIGS, ImageWriter II and SuperCalc 3a.

When I had my Epson RX80 Printer, Printer card in Slot 1, I had no problem sending spreadsheets out to the printer.

But now I have the ImageWriter II in Port 1, and selected the correct printer information and Apple //c port from the menu, it refuses to send to the printer.

What am I doing wrong, or is this program not compatible with Apple IIGS Port 1.

DB Pearce

□ There could be two possible reasons for the problem.

1. You do not have the printer and the Control Panel at matching baud rates. The normal setting is 9600 baud on each. You must set the Control Panel before running the program. If you are getting output from AppleWorks then this is not the problem ...

2. SuperCalc is writing directly to the hardware address of a //c, the serial chip is not directly available on the IIGS in the same way, only programs writing to the Slot firmware are actually able to use the Ports on the GS. This is the most likely cause, and certainly would mean that SuperCalc was incompatible with the GS. If there is a generic parallel printer option, try that instead.

The Boffin



# PC Transporter Configuration Charts

Following on from the two articles on the PC Transporter, we give you the definitive list of the items required

The various configurations of the PC Transporter, reviewed in both the August and October issues, are listed below. Our thanks to Holdens Computer Services for this information.

## II+ Users

Apple II+ Computer with at least one 5.25" disk drive  
16K Language Card  
PC-Compatible Keyboard  
PC Transporter  
II+/IIE Installation Kit  
Monitor (existing or dedicated CGA Monitor)  
PC Disk drive (either 5.25" TransDrive or 3.5" TransDrive/Apple 3.5 Drive)  
ProDos  
PC-DOS (version 2.0 or greater) or MS-DOS (version 2.0 or greater).

## IIE Users

Apple IIE Computer with at least one 5.25" disk drive  
PC Transporter  
II+/IIE Installation Kit  
Monitor (existing or dedicated CGA Monitor)  
PC Disk drive (either 5.25" TransDrive or 3.5" TransDrive/Apple 3.5 Drive)  
ProDos  
PC-DOS (version 2.0 or greater) or MS-DOS (version 2.0 or greater).

## IIGS Users

Apple IIGS with at least one 5.25" disk drive  
PC Transporter  
IIGS Installation Kit  
GS Mono or Colour Monitor  
PC Disk drive (either 5.25" TransDrive or 3.5" TransDrive/Apple 3.5 Drive)  
ProDos  
PC-DOS (version 2.0 or greater) or MS-DOS (version 2.0 or greater).

## Prices:

PC Transporter Card with 256K (Usable as 384K Apple Memory Card)  
£299.00 +VAT  
PC Transporter Card with 640K (Usable as 768K Apple Memory Card)  
£399.00 +VAT  
IIGS Installation Kit  
£49.00 +VAT  
II+/IIE Installation Kit  
£39.00 +VAT  
TransDrive 5.25" 360K Disk Drive  
£159.00 +VAT





# Out of the Glanmire

## Dave Ward does a timely bit of programming to help a member out

Back in 1985 I purchased a Glanmire clock for my Apple II plus computer. Those who have a Glanmire clock will, I'm sure, agree that it is an excellent device that saves a slot by fitting into the games port. Although it may interfere with a few other devices that use the games port it works well with the vast majority of software and hardware. The main advantage of the Glanmire clock was that it fitted into the games port of the Apple II plus and Apple IIe computers thus saving a valuable slot. The package arrived with two 5.25" diskettes containing support software for DOS3.3, ProDOS, Pascal and CP/M. Unfortunately for ProDOS users the file ProDOS on the disk was heavily patched and that the main patch was apparently too large to fit into the space on later versions of ProDOS. The ProDOS version 1.01 supplied by Glanmire also retained the Apple algorithm that calculated the year. The Glanmire clock like most others does not provide the year which must be either supplied by the user or calculated by an algorithm. By deleting this useful algorithm I managed to fit the clock driver into ProDOS version 1.1.1 with just the current year stored within it. This required that the year be updated every year.

I know that a number of Apple 2000 members own Glanmire clocks and would like to use the latest version of ProDOS with their clocks. Recently a member rang the Hotline asking whether there was an update to allow the Glanmire clock to interface with

ProDOS version 1.4 (the latest at the time of writing). I played safe by saying that I didn't think that it could be done but suggested he ring back a few nights later to give me a little time to ponder the matter. I managed to solve the problem within a few hours but unfortunately he didn't ring back. As usual a second look at the clock driver code listing let me see the "wood". I removed 20 bytes and fitted the code into the available space with one byte to spare.



Listing 1 opposite is in effect the binary dump of the code used by the clock driver. From the Applesoft prompt ] you should enter all the data. The CALL-151 drops you into the monitor with its \* prompt. The next 10 lines enter the binary code into memory starting at \$300. The OG (zero G) command from the monitor takes you back into Applesoft with the ] prompt. Finally save the binary file to disk as file G3. See Listing 1.

Listing 2 over the page is the assembly listing using Merlin 8/16 version 3.50. This routine can almost certainly be shortened further. The years list on line 95 in the listing below works until the end of 1992. Note the sequence; leap years have two entries and you move from right to left replacing redundant years. For instance at the end of 1988 replace the first 88 after the 92 with 93 and then the next 88 with 94. In 1990 the 89 can be replaced with 95 and the algorithm will then work until 1995! When you have completed the assembly save the object code as G3.

If you are wondering why there

### Listing 1

CALL-151

```
0300:AD 5D C0 AD 58 C0 AD 5B C0
      AD 5A C0 20 9E D7 20
0310:9E D7 8D 92 BF 20 9E D7 8D
      93 BF 20 9E D7 85 3C
0320:20 9E D7 98 29 0F 85 3B 98
      29 F0 4A 6A 6A 6A 85
0330:3A A8 4A 6A 6A 6A 05 3C 8D
      90 BF 08 29 1F 79 C7
0340:D7 90 02 69 03 38 E9 07 B0
      FC 69 07 E5 3B B0 02
0350:69 07 A8 B9 D4 D7 28 2A 8D
      91 BF 60 A2 08 A9 00
0360:85 3A 46 3A AD 63 C0 29 80
      18 65 3A 85 3A 8D 59
0370:C0 8D 58 C0 CA D0 EB C9 00
      F0 08 A8 F8 38 E8 E9
0380:01 D0 FB 8A D8 60 00 1F 3B
      5A 78 97 B5 D3 F2 14
0390:33 51 5A 59 58 58 57 56 55
      00 00 00 00 00 00 00
```

OG

BSAVE G3, A\$300, L\$9A

are two ORG statements in lines 1 and 2 the reason is as follows:- The first ORG ensures that the object code-file has a start address at \$300. The second ensures that the code generated will be correctly aligned when it is eventually moved to \$D742. Listing 2 is on the next page.

Listing 3 over the page is an Applesoft program that patches your ProDOS version 1.4 file on a disk so that when the diskette boots the Glanmire clock routine is automatically installed. Note that the program makes use of the enhanced features of BSAVE under the ProDOS-Applesoft interface that allow one to bsave patches directly from memory into the correct position within the file on disk. Listing 3 is over the page.

Ewen Wannop tells me that the files including the patched version of ProDOS 1.4 will be available on TABBS Bulletin Board for downloading in due course.

The original code is, of course, the copyright of Glanmire Electronics and the amendments to the code in this article are not intended to affect that copyright.

Dave Ward



## Out of the Glanmire - Listing 2

```

1          ORG      $0300
2          ORG      $D742
3
4  -BF06    4  DATETIME EQU  $BF06
5  -BF90    5  DATE     EQU  $BF90
6  -BF92    6  TIME     EQU  $BF92
7
8
9  CLOCKDVR
10         LDA      $C05D
11         LDA      $C058
12         JMP      JMP1
13         BIT      $C0E9
14         JMP1     LDA      $C05B
15         LDA      $C05A
16         JSR      READ8
17         ; Ignore the seconds !!
18         JSR      READ8
19         ; Read minutes and
20         STA      TIME
21         ; store the value found.
22         JSR      READ8
23         ; Read the hours
24         STA      TIME+1
25         ; and store value found
26         JSR      READ8
27         STA      $3C
28         JSR      READ8
29         TYA
30         STA      $3B
31         STA      $3A
32         LDA      #$0F
33         AND      $3B
34         STA      $3B
35         LDA      #$F0
36         AND      $3A
37         LSR
38         ROR
39         ROR
40         ROR
41         ROR
42         ORA      $3C
43         STA      DATE
44         PHP
45         AND      #$1F
46         ADC      MONTHLEN-1, Y
47         BCC      LAB0
48         ADC      #$03
49         SEC
50         MOD7     SBC      #$07
51         BCS      MOD7
52         ADC      #$07
53         SBC      $3B
54         BCS      LAB1
55         ADC      #$07
56         LAB1     TAY
57         LDA      YEARS, Y
58         PLP
59         ROL
60         STA      DATE+1
61         RTS
62
63         READ8
64         LDX      #$08
65         LDA      #$00
66         STA      $3A
67         NEXTBIT  LSR      $3A
68         LDA      $C063
69         AND      #$80
70         CLC
71         ADC      $3A
72         STA      $3A
73         STA      $C059
74         STA      $C058

```

```

00D7C3: CA 75 DEX
00D7C4: D0 EB =D7B1 76 BNE NEXTBIT
00D7C6: C9 00 77 CMP #$00
00D7C8: F0 0A =D7D4 78 BEQ RDONE
00D7CA: A8 79 TAY
00D7CB: F8 80 SED
00D7CC: 38 81 SEC
00D7CD: A2 00 82 LDX #$00
00D7CF: E8 83 NEXTRX INX
00D7D0: E9 01 84 SBC #$01
00D7D2: D0 FB =D7CF 85 BNE NEXTRX
00D7D4: 8A 86 RDONE TXA
00D7D5: D8 87 CLD
00D7D6: 60 88 RTS

```

```

00D7D7: 00 1F 3B 5A 92 MONTHLEN
DFB $00,$1F,$3B,$5A,$78,$97
00D7DB: 78 97 B5 D3
DFB $B5,$D3,$F2,$14,$33,$51
00D7DF: F2 14 33 51
94
00D7E3: 5A 59 58 58 95 YEARS
DFB 90,89,88,88,92,92,91
00D7E7: 5C 5C 5B

```

End Merlin-16 assembly, 168 bytes, errors: 0,  
symbol table: \$1800-\$1893

Symbol table, alphabetical order:

```

? CLOCKDVR=$D742    DATE    =-$BF90
? DATETIME=$BF06    JMP1    =-$D74E
LAB0    =-$D794      LAB1    =-$D7A1
MOD7     =-$D795      MONTHLEN=$D7D7
NEXTBIT  =-$D7B1      NEXTRX  =-$D7CF
RDONE    =-$D7D4      READ8   =-$D7AB
TIME     =-$BF92      YEARS   =-$D7E3

```

Symbol table, numerical order:

```

? DATETIME=$BF06    DATE    =-$BF90
TIME     =-$BF92    ? CLOCKDVR=$D742
JMP1     =-$D74E    LAB0     =-$D794
MOD7     =-$D795    LAB1     =-$D7A1
READ8    =-$D7AB    NEXTBIT  =-$D7B1
NEXTRX   =-$D7CF    RDONE    =-$D7D4
MONTHLEN =-$D7D7    YEARS    =-$D7E3

```

## Listing 3

```

100 PRINT CHR$(4)"PR#3"
: PRINT
: HOME

120 A$ = "GLANMIRE CLOCK UPDATER FOR PRODOS
1.4"
: PRINT SPC( (80 - LEN(A$)) / 2);
: INVERSE
: PRINT A$;
: NORMAL
: PRINT

140 VTAB 10
: PRINT "ENTER THE VOLUME NAME WHERE THE FILE
PRODOS IS >";
: INPUT "";V$

160 IF LEFT$(V$,1) < > "/" THEN PRINT
: PRINT "VOLUME NAME MUST BEGIN WITH /"
: FOR M = 1 TO 9999
: NEXT
: GOTO 100

180 IF LEN(V$) > 15 THEN PRINT
: PRINT "VOLUME NAMES CANNOT BE LONGER THAN 15
CHARS."

```





```
: PRINT
: FOR M = 1 TO 9999
: NEXT
: GOTO 100
```

```
200 PRINT CHR$(4)"BLOAD G3"
```

```
220 VTAB 5
: PRINT CHR$(11)
: PRINT
: VTAB 10
: PRINT "PLACE ";
: INVERSE
: PRINT V$;
: NORMAL
: PRINT " DISK IN A DRIVE AND PRESS A KEY >";
: GET K$
: PRINT
```

```
240 PRINT CHR$(4)"BSAVE
PRODOS,TSYS,B$3100,A$300,L$99"
: REM ---- PRODOS ALLOWS ONE TO SAVE PORTIONS
OF MEMORY TO ANY POSITION WITHIN A FILE ON DISK
---- !!
```

```
260 POKE 768,199
: PRINT CHR$(4)"BSAVE
PRODOS,TSYS,A768,L1,B$61C"
: REM ---- A ONE BYTE PATCH TO SHOW G ON THE
SCREEN ON BOOT-UP ----
```

```
280 POKE 768,76
: POKE 769,157 : POKE 770,39
: PRINT CHR$(4)"BSAVE
PRODOS,TSYS,A768,L3,B$789"
: REM ---- PATCH PRODOS TO SET UP THE CLOCK VEC-
TOR ----
```

```
300 HOME
: VTAB 10 : HTAB 35: PRINT "JOB DONE !!"
```



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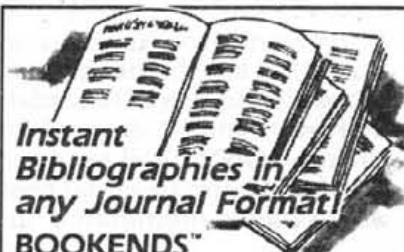
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# In the land of Make Believe

Pete Kemp takes a break from reality and reviews two adventure games

## DEATHLORD

Deathlord is one of the latest games from Electronic Arts. It comes in a standard 8 inch square fold out format. The package contains two disks (three sides used), a quick reference card and a 26 page instruction booklet. It runs on all 64K Apples with at least one 5.25 drive, although two can be used.

The player controls a team of (up to) six adventurers. Their task is to gain experience, knowledge and special items. Properly equipped, they will be able to confront the renegade wizard who is attacking the world of Lorn.

Of course, experience doesn't come cheaply. Money isn't cheap. Knowledge means talking to a lot of people. Special items have to be fought over. It's going to be a tough job.

The game provides a ready made team, although players may import favourite characters from Bard's Tale

1, Ultima or Wizardry. The available choice is quite staggering - far too many to list here. Each character may pick from eight races (Human to Kobito) and sixteen (count 'em!) classes. Magic is an important element in the game. As you might expect, each permutation of race and class has its pro's and con's. Good fighters are poor magic users. Good magic users

have poor stamina. And so on. It's important for the player to assemble a proper team. Six ninja might make an excellent killing machine. But once you've got past the guards, who's going to pick the lock on the door?

It will take some time to assemble a balanced team. Don't worry about losing it in the early days. There's so much to learn and map that losing the odd team isn't the end of the world. You'll need to equip your warriors with armour and weapons. Of course, you have to live long enough to get to the armoury. You'll need to remember where it is, as well. You'll need to make maps. Lots of them. Without them you haven't, literally, got a hope in hell.

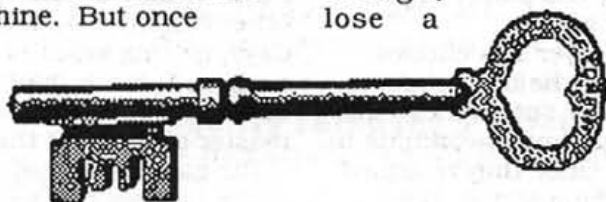
The game mechanics are similar to Ultima and Wasteland. The player's team is shown centred on screen, with the terrain flowing underneath. The world contains towns, cities, caves, lakes, seas and so on. The game scale adjusts according to location.

Thus, when the team enters a town, metalled roads appear with shops alongside. Equally, when on the open plains, the team seems to be

wearing seven league boots, striding across the landscape.

The instructions contain full details of all the spells available to magic casters. In addition, just about every key on the keyboard has a function, ranging from A for Attack through to Y for Yell and Z for Drink (?). This isn't a game you can play with your eyes glued to the screen. I confess I don't like this approach. In particular, the real time clock is forever ticking away. In the time it takes to look up/remember the code for Search (F), a baddie can appear and start attacking the party. If you don't respond quickly enough, you can lose a

melee round. I would appreciate a "Pause" key.



Those who enjoy Ultima (or Wasteland) have a treat in store. This is a lot of game for the money.

## WASTELAND

"Wasteland" is one of the latest games from Electronic Arts. It covers four sides of 5.25 inch disks and is compatible with the entire Apple II range, providing you have 64K of RAM. You'll need (at least) one 5.25 drive and a minimum of four blank disks.

In the now familiar 8 inch square foldout cardboard sleeve, the package contains 2 double sided 5.25 inch disks, a game manual and a summary card. Copy protection is provided by a book of "paragraphs". I'll come back to these later.

The game manual outlines the scenario: Following the holocaust (1998) the continental USA is a radioactive wasteland. Odd pockets of civilisation remain, however. Among these is the remnants of a company of US Army Engineers. Alone in the desert, their centre has grown powerful enough to repel criminal groups (and worse) trying to overtake them. With the passage of time, it has become known as "Ranger Centre", maintaining what



passes for law and order.

The Rangers are a motley bunch, with names like Angela Deth, Snake Vargas and Hell Razor. The baddies are worse. Much worse. From mutant lizards to religious fanatics, they're all intent on one thing - your immediate death.

At the start of the game the player has the option of taking over a pre-defined group of players or creating his own team. Each individual has certain characteristics covering strength, intelligence, luck, speed, agility, dexterity and charisma. Each character has strong points and weak points, which is why the player must run them as a team.

Once the player has chosen his characters, he then chooses their particular specialities. The range is huge, from swimming to metallurgy. Once they're armed (rifle or machine pistol), the team is ready to move out into the big, wide world.

The team has some clues - disturbances in the local communities. Arriving at one of these (assuming they haven't been attacked and killed in the desert) the team will meet a young boy. They'll need to talk to him and find out why he's crying. And what to do about it. They'll need to search the village for clues. They'll find a village hospital willing to tend their wounds. Unfortunately, they'll need to pay the doctor. They haven't got any money. Yet.

Thus the game unfolds. The team must travel the Nevada desert, staying alive long enough to find, and piece together, scraps of information about genetic experiments in a secret laboratory. The secrets of Las Vegas. The connection with Mars. And much more.

The mechanics of the game are similar to the "Ultima" series. The team is shown as a character on the screen, with the map moving under it. They can enter towns, villages, caves, missile bases and so forth. Combat is on a one to one basis. The better equipped a character is (and more experienced) the

more likely he is to survive another day. Some thought has gone into this area - guns run out of ammunition and can even jam!

I liked the concept of this game very much. However, the implementation takes some of the shine off. For example, the player must use copies of the master disks. This is good, since it saves wear and tear on them. But, having copied the disks, the player still needs to use the master disk to boot the game each time. Trying to boot from the copy disk simply crashes the machine into the monitor. (This is true for the IIGS - it may be different for other machines.) In the early days, getting killed is very quick and easy. Each time, it is necessary to dig out the system master and reboot the machine.

The game is sort of copy protected (see previous paragraph). In addition, there is a 28 page book of "paragraphs" included with the game. At strategic moments, the player is prompted to read a specified paragraph from the book. Presumably Electronic Arts works on the principle that giving away copies of the disks is one thing - photocopying 28 pages is something else entirely.

In conclusion, I would recommend the game to Ultima fans and other players who enjoy this sort of animated detective puzzle. It is good value for money at the recommended price.

Pete Kemp



info

Product : Deathlord  
Publisher : Electronic Arts  
Available from :  
MGA Microsystems  
Pear Tree  
Appledore  
Kent TN26 2AR  
Tel 0233-83571  
Price : £29.95

Value : ★★★★★  
Performance : ★★★★★  
Documentation : ★★★★★

info

Product : Wasteland  
Publisher : Electronic Arts  
Available from :  
MGA Microsystems  
Pear Tree  
Appledore  
Kent TN26 2AR  
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Value : ★★★★★  
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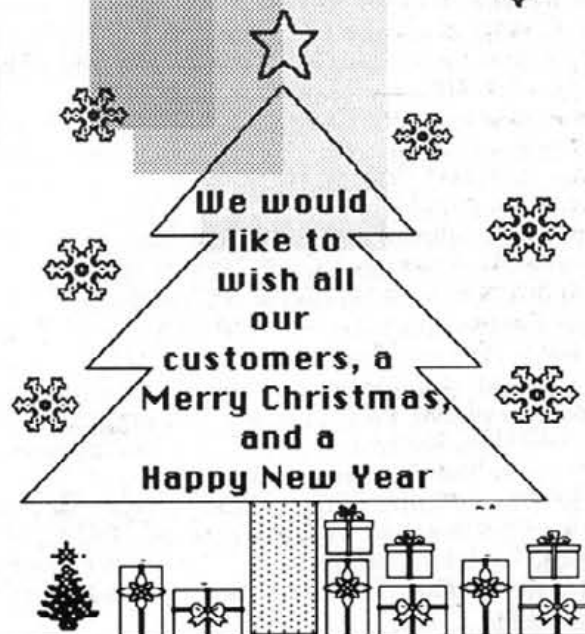
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# Battle Stations !

## K John Kishimoto puts to sea with the US fleet in WWII

### DESTROYER

Destroyer (GS) puts you in command of a Fletcher Class US Destroyer 'somewhere' at sea during WWII. Unlike some other simulator type games, however, Destroyer is strictly of the 'action' genre.

### The Game

Gameplay consists of one of seven possible scenarios. These allow you to exercise your skill at single event actions, such as anti-submarine warfare, or multiple event actions, such as convoy escort, when the enemy throws everything they have at you.

In all cases, you have 3 levels of difficulty to contend with as you engage the enemy.

During the course of a game, you have 10 possible stations available. Navigation allows you to plot a path through and around islands in order to comply with your mission requirements. After plotting, you can engage the automatic helm through the Bridge controls, causing the destroyer to follow your predesignated course. The Bridge also allows you to interrogate the sonar, radar and damage stations for a report. All messages and reports from various stations are displayed on a one line display near the bottom of all the screens. Other bridge functions are helm controls, including manual, automatic, pursuit and evasive, crew status and weapons control.

Although the computer will inform you of impending attack, you can get detailed information of the attack by examining either the Radar or Sonar. Since

manual control of the ship is useful while using these stations, helm controls are duplicated. If visual sightings are required, the Observation station can be used.

As in a real destroyer, your ship comes equipped with a generous complement of weapons. It has fore and aft 5" guns (with targeting radars of course), port and starboard anti-aircraft guns and port and starboard torpedoes. To discourage the odd prowling submarine, the ship is also supplied with two depth charge launchers, and two stern "roll off" depth charge racks.

While under attack, any one of the 10 stations (except for the observation and damage stations), as well as steering and engines, can be damaged, which will hamper the operation of the ship. Four damage control crews will automatically repair the damaged station as required, and by selecting the Damage control station you can receive reports or assign crews manually.

The action takes place in an anonymous stretch of water, dotted here and there with islands. The ship is limited to the sea area bounded by the borders of the navigation map, as a result, freedom of action is restricted, and you are obliged to follow the selected scenario or lose the game.

### Graphics and Sound

Destroyer takes full advantage of the graphics and sound capabilities of the GS. The

display of each of the screens is well designed, giving the appearance of depth to various instrument controls and indicators. The only disappointment in the display are the islands. These consist of multi-banded 'lumps' rising out of the sea with little resemblance to real islands.

On the other hand, Destroyer uses digitised sound to enhance the action sequences. Firing your anti-aircraft guns while you hear bombs detonating on the ship adds considerable atmosphere and excitement to the game.

### Controls

Although the game can be played using a joystick, selection of various stations has to be input through the keyboard. Fortunately, the station identifiers (such as NA for Navigation) have been shortened to two letters making selection relatively easy.

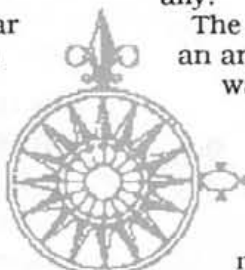


### Conclusion

As in many GS games, Destroyer makes good use of the graphics and sound capabilities of the computer. However, I feel that it lacks depth and should perhaps be regarded as a sophisticated arcade type game with limited strategy.

DESTROYER requires a GS with 512K and 3.5" disks.

K John Kishimoto



info

Product : Destroyer  
Publisher : Epyx  
Available from :  
MGA Microsystems  
Pear Tree  
Appledore  
Kent TN26 2AR  
Tel 0233-83571  
Price : £24.99

Value :   
Performance :   
Documentation :



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**PlusRAM-16** is designed to let your Apple II+, IIe or IIGS keep right on growing - right up to a huge sixteen megabytes! It's a RAMDisk card which plugs into any standard slot and works just like an incredibly fast disk drive, making your programs operate at electronic speeds! Built using custom logic circuits, the advanced design of **PlusRAM-16** gives high reliability and, despite its massive capacity, it uses much less power in your Apple than other RAMcards.

■ **PlusRAM-16** is supplied with the unique **RamDesk Manager** which lets you control all that extra memory and change instantly between programs as often as you like, without having to use slow drives.

■ **PlusRAM-16** is supported by more software than any other RAMcard; ProDOS, Pascal 1.3 and Cirtech CP/M Plus automatically recognise **PlusRAM-16**, and full support is included for DOS 3.3, CP/M 2.20b/2.23 and Pascal 1.1/1.2.

■ **PlusRAM-16** is designed to observe Apple standards to guarantee maximum compatibility.



The **PlusRAM-16** in this example has been set up using the **RamDesk Manager** to have four different RAMDisks, one each for AppleWorks (ProDOS), DOS, Pascal and CP/M Plus. The graphics **RamDesk Manager** shown is for use with the enhanced 128K Apple IIe and Apple IIGS. A text version is also supplied for use with other Apple Models.

## PlusRAM-GS8 . . . maximum power for your GS

**PlusRAM-GS8** is the *only* GS RAMcard that lets you add up to eight extra Megabytes of RAM and half a Megabyte of ROM to your Apple IIGS! All you have to do is plug **PlusRAM-GS8** into the special IIGS memory expansion slot for instantly recognised extra RAM that's fully compatible with all IIGS software, as well as ProDOS, DOS3.3, CP/M and Pascal 1.3.

Use all or part of the **PlusRAM-GS8** memory as a RAMDisk to give old-favourite programs a new lease of life, or use new programs, with advanced desktop displays, graphics and sound, which address the **plusRAM-GS8** memory directly. Either way, you'll be amazed at the extra power and speed!

### AppleWorks Power:

Use the IIGS mouse to move the cursor around or to select menu items



A full function memory-resident calculator pops up onto the screen the instant you need it!

Adds a massive 42K printer buffer which you can assign to any printer. This means you can keep AppleWorking while it handles the printing - no more waiting for a slow printer to finish!



Large desktop files are automatically saved to multiple disks.

Date and time are displayed on the AppleWorks screen at all times.

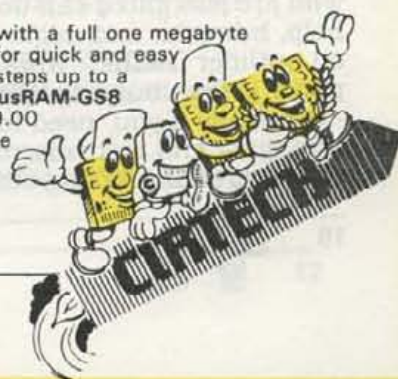
17/06/87 12:04

### Instant Programs and Start-Up:

When fast isn't good enough, **PlusRAM-GS8** is the only IIGS RAMcard to give instant start-up for your programs using the unique **PROMDisk** or **ROMDisk** adaptors. These Adaptors plug onto the expansion connector on **PlusRAM-GS8** and give up to 256K battery backed-up static RAM or 512K ROM to let you store your favourite programs ready for immediate use the instant you switch on your IIGS!

### Easy Expansion:

**PlusRAM-GS8** comes ready with a full one megabyte of memory and is socketed for quick and easy expansion in one megabyte steps up to a massive eight megabytes. **PlusRAM-GS8** at one megabyte costs £249.00 and each additional megabyte costs £125.00





# THINKWORKS

## Dr Peter Stark takes a look at an Outliner and tells us what it does

### Thinkworks

An outliner (or outline processor) is a computer program which helps its user to arrange ideas, information, or other material in a structured way. It can be used to group things together easily, to set up sub-groups under main group headings, sub-sub-groups within sub-groups, and so on. In this way, the subject matter can be organised into suitable groups at several chosen levels. By using an outliner, groups (or single items within them) can be edited, rearranged, and manipulated as desired. Thinkworks (from Megahaus) is an example of an outliner which runs on Apple II series computers. Although this program has been available for some time, it seemed possibly useful to review it here in the light of experience - and partly to help other people to be aware of this kind of program and some possible uses.

### Who is likely to find Thinkworks useful?

If you feel competent at sorting out and organising ideas and information entirely on paper (or in your head), you probably don't need an outliner (and you wouldn't use it if you had one). Those of us who are less gifted can do with help, however, and might find an outliner useful. Working on paper is fine, but has limitations - especially if you need to try rearranging and restructuring your material. Among other

things, an outliner allows you to try out alternative arrangements quite easily. Often, I have found it best to work out a first rough version on paper, and then to use Thinkworks on my Apple to produce a draft outline which I then alter until the result suits my needs. This is a matter of personal preference, and different techniques may well suit other people better.

### Examples of possible uses for an outliner.

How one might use an outliner depends on what one's needs and interests are: the scope is wide. Just as a first example, imagine that you are starting to prepare a talk of some kind. To begin with, you might use Thinkworks (or another outliner) to list the main subjects of your talk. Under each of these main headings, you could then put sub-groups showing the individual topics that you will want to discuss. At further lower levels within these sub-groups, you might wish to enter more specific points that you wish to bring out, and you could then list the slides or other exhibits that are to be shown at various stages during your talk,

and so on. In this way, you would be able to build up a possible structure for your talk,

and you could then alter it on screen until you were fully satisfied. Similarly, I have also found Thinkworks useful as a way of laying out and deciding the structure and contents of reports, papers, or articles that I

intend to write. Here too, the outliner helps in arranging and reorganising information and ideas at different levels. There are lots of other possibilities: defining what jobs need to be done, and in what order; listing people who need to be seen, and what particular things ought to be discussed with each person; preparations for holidays, visits, shopping, work, training, and so on.

As an example of what Thinkworks produces, Figure 1 (over the page) shows part of the outline which I used in preparing this review: several levels of information can be seen. In contrast, Figure 2 shows the screen display of the same part of this outline, but with only the top two levels on view. In the latter case, the '+' signs before some entries mean that these entries are 'collapsed' and that there are subsidiary lower level entries which are not currently shown on the screen.

### What is supplied, and what is needed

Thinkworks comes in two versions - as two 5.25" disks which work in an Apple IIC or IIE with 128K, and as a 3.5" disk which works also on the IIGS. Both versions are free from copy protection. A manual is also supplied - this is discussed below. With the 5.25" version in particular, it is best to have two disk drives. One drive alone can be used, but at the cost of a lot of disk swapping. Various types of printer can be used.

### Use of Thinkworks in practice

I found Thinkworks quite easy to learn to use. It is menu-driven, and there are plenty of prompts to check that the user really intends the next action. Pleasingly, it is difficult to cause Thinkworks to 'crash' to an unwanted halt. Thinkworks is operated entirely from the keyboard, and in many cases you merely have to press 'Open Apple' plus a letter. For example, 'OA-A' lets you 'append' (insert) an entry at one outline level lower than the current entry; 'OA-S' saves the outline on which you are working, and so on. Thinkworks allows





you to use up to 10 different levels, which is more than enough for most purposes. Each level is numbered or lettered according to a logical (but slightly curious) system, and you can choose whether or not to print these numbers and letters. The actual entries are typed in much as with an ordinary

word processor. There are the usual editing features, such as deletion of characters, overstrike and insert cursors, word wrap at the ends of lines, and Find and Replace. Single entries, or groups of entries, can be deleted, moved, or copied. Even with long outlines, you can easily scroll to the beginning or the end, or by one or more pages or entries at a time. Multi-level outlines can be 'collapsed' to show only the top one or two levels. If you wish to see more details, you can then 'zoom' back to show as many levels as you wish. There are various other facilities, described in the manual.

When you are reasonably satisfied with what you have put together on the computer, you can print out a copy of your outline (many printing options are offered), and of course you can save the outline onto disk. As an alternative, outlines can be saved in AppleWorks format, for inclusion in AppleWorks Word Processor documents. However, it is not possible to go in the reverse direction, from AppleWorks to Thinkworks.

#### The manual

The Thinkworks manual is a slim paperback, some 70 pages long. It is clearly written, easy to handle, and hard-wearing. Most of the first part is a tutorial, aimed at getting the new user familiar with Thinkworks. The last 20 pages or so are for reference, and summarise the Thinkworks instructions, options, and error messages.

#### Overall comments

Thinkworks is an efficient outliner which is commendably foolproof and simple to use. As

I mentioned earlier, some people may find this sort of outliner quite helpful: others would not take to it at all, and would regard it as a waste of time and effort. For completeness, there are a few minor

quibbles which ought to be mentioned. For example (in contrast to AppleWorks)

it is not possible to format a disk from within Thinkworks. Also, there seem to be no ways of (a) directly adding a new entry right at the beginning of an outline, or (b) saving an outline onto a disk different from the one from which the original version was loaded (one might want to do this for backup purposes). These grumbles are of relatively low significance, however. Overall, Thinkworks is

**info**

**Product :** ThinkWorks  
**Publisher :** Megahaus  
**Available from :**  
MGA Microsystems  
Pear Tree  
Appledore  
Kent TN26 2AR  
Tel 0233-83571  
**Price :** £47.95

**Value :** ★★★★★  
**Performance :** ★★★★★  
**Documentation :** ★★★★★

a competent piece of software which does its job reliably (albeit sometimes a little slowly), which is not difficult to work with, and which has quite a number of possible uses.

**Dr Peter Stark**

**Figure 1**

#### I. WHAT AN OUTLINER DOES

##### A. Grouping of things together

- 1) Sub-groups under main group headings
- 2) Sub-sub-groups within sub-groups, etc.
- 3) Organisation of subject matter into chosen levels

##### B. Edit, rearrange, and manipulate, using the computer

##### C. Thinkworks is an example:

- 1) Runs on Apple II series
- 2) Has been available for some time
- 3) But review at this stage could be useful?

#### II. WHO IS LIKELY TO FIND THINKWORKS USEFUL?

##### A. If self-sufficient at sorting out and organising ideas - unlikely to be interested

##### B. People who might find an outliner useful

- 1) Limitations of just working on paper
- 2) Ability to try out different arrangements of material

##### a) One technique:

- 1) first rough version on paper
- 2) use Thinkworks to produce a first outline
- 3) use computer to alter
- 4) find the most suitable alternative, and decide on this

##### b) Other people may find different techniques better

#### III. EXAMPLES OF POSSIBLE USES FOR AN OUTLINER LIKE THINKWORKS

**Figure 2**

#### I. WHAT AN OUTLINER DOES

##### A.+Grouping of things together

##### B. Edit, rearrange, and manipulate, using the computer

##### C.+Thinkworks is an example:

#### II. WHO IS LIKELY TO FIND THINKWORKS USEFUL?

##### A. If self-sufficient at sorting out and organising ideas - unlikely to be interested

##### B.+People who might find an outliner useful

#### III. EXAMPLES OF POSSIBLE USES FOR AN OUTLINER LIKE THINKWORKS

# A Sorry Tale

## A review of Springboard Publisher by Ewen Wannop

Although I am an evangelist for the Apple II computer, I have a healthy respect for our stable mate the Macintosh, and in fact use the Macintosh every day to teach my students Desktop Top Publishing (DTP) and other Graphic techniques. This extensive experience of both the II and the Mac has shown me the strengths and weakness of each. A computer is there to solve a problem and the Macintosh primarily has the speed and greater processing power to do it. With accelerator cards, additional memory and the right software, the II need not be far behind.

I am a software developer as well, and I subscribe to the view that any computer, including the II, can be made to do almost anything you wish. Give it enough memory, the time to work, and most importantly the correct software, you are able to match the achievements of the Macintosh even on the humble Apple II. The software is the key, as it is the software that embodies the vision of the software developer.

I stress this vision deliberately, as without the correct and well written program no computer however powerful it is, realises its full potential. Every so often, the right software and the right machine do get together and make a winning combination. In the early days of microcomputing this was Visicalc and the Apple II, more recently it has been PageMaker and the Macintosh. Without the impetus that PageMaker gave DTP, would Apple still be the dominating factor in this field today? It is this combination that has set the standard for DTP that all other computers have been trying to emulate unsuccessfully ever since.

I have seen programming standards dramatically improve in the last few years on the Apple II. This is due to many factors, but perhaps the major factor is the introduction by Apple of the Desktop environment as a standard across all of its machines. Although originally created for the Macintosh, the desktop has been successfully embodied in the IIgs and a very good implementation has also

been achieved on the double high resolution screen of the //e and //c. We can now expect all programs to have windows, pull down menus, and other elements of the desktop that we now instinctively use.

The software developer has the crucial role in the grand scheme of things in developing the idea and creating the application. He must draw his experience not only from within himself but from that of others, and he must make each step forward in the light of his own and others mistakes. It is only through such an arduous and painful experience that new heights are achieved in programming techniques or expectation.

The power of a program was once limited by the hardware available. With the reducing cost of memory, 1meg or larger is almost common place now even on the Apple II, and with high volume 3.5 disks and cheaper SCSI hard drives, we have seen the power of programs increase rapidly. In recent months the launch of the Zip Chip promises to change the face of computing on the II once more. Its dramatic increase in speed makes larger programs with their consequent high overheads of memory manipulation, a possibility. The IIgs, having much of this expansion built in as standard, is already used to the extra programming power that we now expect.

### The Reality

It was bearing all these points in mind, that I eagerly looked forward to reviewing Springboard Publisher on the II. From what I had already gleaned from advertising in the American press, this program was a serious attempt to provide DTP facilities on the IIe, //c and IIgs. Having already had a taste of this with Publish It!, I had hoped that Springboard Publisher would at last be the realisation of a dream that true DTP could be achieved on the II. As I have explained already, I see no real reason why it cannot be done given the right program.

Springboard Publisher like Publish

It! has LaserWriter drivers available to give high quality laser output from the program. This would give it the same potential output that we expect from PageMaker and the Macintosh. In both cases the programs can also address a range of dot matrix printers albeit with a lower quality output. There is also a wide range of extras such as 'clip art', 'fonts' and 'style sheets'.

However, my dream collapsed when I started to work with the program. It very quickly became clear that the authors had made a terrible and awful lapse of judgement, and that their efforts had only managed to produce a lumbering monster of a program instead of the powerful publishing tool I expected. What I found was an excruciatingly slow and very limited pagemaker program, and with an inferior output.

However, I will give credit where it is due and review the good points of the program, but for the present I feel I should explain my basic findings in greater detail.

I am spoilt perhaps by my experiences with the Macintosh SE and PageMaker. This is a combination which allows very fast pagemakeup, and without which this magazine would never see the light of day! But even with this speed, I curse it if it takes some five seconds to redraw the screen if I change something. This is quite common if you are using a large A3 screen and have two A4 pages of text displayed full size. However Springboard Publisher takes *five minutes* to do the same thing on only one A4 page. This is just plain silly. It is not impossible to do it fast on a II, Publish It! for instance achieves the same result in *fifteen seconds*.

At this point I was so surprised at how long everything was taking that I timed the complete preparation of an A4 page with three columns of text at 9 point. This is something which is not at all out of the ordinary and is common place in magazine production. So that I would emulate the average //e user, I set the IIgs clock to normal or slow speed and ran the program from floppies disk. I started by importing a prepared text document 4.5K long, it took just over *twenty-two minutes* with Springboard Publisher to set the page! I used no rules or graphics. I then tried the same page with Publish It! This took only *two minutes*! I then set the IIgs at full speed (the equivalent would be a //e with accelerator or Zip Chip) and ran the program completely from Ram. I cut the time to just over *six minutes* for Springboard Publisher and *sixty-two seconds* for Publish It!.

I will elaborate on this speed problem later, but there is a second very basic limitation of Springboard Pub-



lisher. You cannot use fonts other than the special fonts provided. These fonts do not match LaserWriter fonts and are only available in limited sizes. This becomes a very real problem when you use the LaserWriter. You must match screen fonts to the LaserWriter output or you are simply working blind and will have no idea as to size and positioning of columns of text. It is not impossible to use standard fonts as Publish It! will allow any Macintosh/GS style font to be used. For instance all the fonts in our GS library can be used by Publish It!, you only need to change the file type to \$F4 for Publish It! to recognise them. There are a number of other comparisons like this that I could make between the two programs, but it would be unfair to continually compare them in this way as there are some things that Springboard Publisher can do that Publish It! will not allow.

### The Source of the Problem?

Springboard are well known for their marketing policy of providing software that is available for a wide range of machines. We first saw this with Newsroom, a program that allowed documents to be transported between IBM, Commodore or Apple.

Springboard Publisher in a similar manner is available for the Apple II or the IBM PC. It may well be that the program has been written in some compiled language that allows common parts to be used for both machines. However this programming approach does not allow the maximum speed to be wrought from any kind of program. With a program that handles large amounts of data, it is important to have machine language subroutines to make sure the maximum speed is obtained from the machine.

I feel that in fact they just got the whole approach to the program wrong. There are various points in the program flow that have just been approached in the wrong manner. No computer, not even the Macintosh, can display on screen what you will get, all the time. Rather than WYSIWYG it is WYGIBTWYS, which is not a Welsh village but What You Get Is Better Than What You See. Therefore short cuts must always be taken in drawing the screen display. The display must simply do the best it can under the circumstances, in order for a sensible speed to be achieved as the screen refreshes. It is not necessary for areas of text offscreen to be drawn into memory, it is sufficient for the program to simply work out leading and position for the display to be correct. Publish It! for instance takes this approach. Springboard Publisher on the other hand apparently draws absolutely everything to mem-

ory. There are very long waits as the display runs down to the foot of a column before it reappears again at the top of the next one.

The way that the program has been constructed is also very odd. Both text and drawing are involved in any DTP work, words are text, rules are drawings. Springboard Publisher has been split into two very distinct activities, text manipulation and a drawing window. These two activities are drawn into separate boxes, either Text or Drawing. This is similar to the way Quark Xpress on the Macintosh works, but instead of being able to draw lines or rules anywhere you want on the screen, they have to be first drawn into a picture box, and this takes a long time.

When you start a new page, you first see a display which shows you the whole page. You can then go from this display to either text editing or picture drawing by double clicking on the appropriate part of the display. All very well you may think, but it takes 60 seconds to simply switch displays. This means that if you want to draw a rule between two columns, you must first create a drawing box in full page display, go to the drawing screen, and then draw the line into this box. If this line were to fill a complete column, you have to draw it in stages, as the screen is shown actual size and so will only show a part of the page at any one time. You must also remember to set the drawing box to have no outline or a box will be drawn round the rule. As it takes a minute to change displays, each of these steps takes so long, that you simply do not consider doing it a second time.

Because of this, I was inclined at first to abandon the review, but I think it was my eventual astonishment at seeing how long everything was taking that made me continue. As a software developer myself I felt there were some very serious lessons to be learned. It was not impossible to write a program to allow reasonably fast DTP on the II, Publish It! had shown that, but Springboard Publisher was certainly not the answer.

It is only fair to point out again here that Publish It! has serious flaws. You cannot for instance create columns or text boxes with any ease to any size. Once a box is drawn, the 'handles' will not change the size of that box. This means that if you want accurate columns, you must use the 2x2, 3x3 or 4x4 preset guides. Springboard Publisher on the other hand will allow you to have many columns and change the widths at will, albeit in a rather clumsy way.

I began to wonder who this program

was aimed at. I had assumed that Springboard was addressing a serious market with this program, it does cost more than Publish It! after all.

### THE REVIEW....

I think what impresses people most about Springboard products is the packaging and documentation. All programs are packed in durable plastic library cases and have excellently prepared documentation.



Publisher is no exception and comes in a large box with two excellent spiral bound manuals and a wipe clean Desktop Reference card. The first manual is a comprehensive 'Getting Started' guide, and the second is an 168

page Reference manual. Both were more than adequate for their purpose. My only quarrel with them was the use of rather 'Mickey Mouse' drawings, though this is a style common to all of the Springboard programs I have seen. It may appeal to primary school teachers, but not I hope to serious users of the program.

### Installation

The version I reviewed came on a 3.5 protected disk, though 5.25 versions are available as well. Because of the large program, 61K for the main shell, 267K for overlays, 101-239K for fonts and some 128K for scratch working area, it would be unrealistic to run from 5.25 floppies though it can be done. If you do not have 3.5 drives you can load and run from a Ram card using the 5.25 disks. The Cirtech Plus Disk is an ideal candidate for this if you intend working with the program to any extent, as you can load and startup from Ram at any time.

The program constantly layers itself into memory from disk, this is especially noticeable when selecting menu items. For this reason alone, it is almost essential to run from a Ram drive to gain maximum speed.

The program will also need a 'scratch' disk while it is working, and this is where a Ram card is almost obligatory to squeeze that precious extra speed.

You also specify the printer and the serial port, and you will find the usual array of obscure printers that can be addressed. Hopefully if you do not have an ImageWriter yours is amongst the list.

Publisher also supports the mouse, and although the program can run without one, it is almost an impossibility. For some obscure reason, the arrow keys are not supported in text mode!

The master disk is copy protected, and even with the program installed on some other device, it will ask for this 'key disk' whenever you start up.

### Working with the program

With the program installed, the real test was to actually get a page together and print it, and this is where your patience becomes stretched to breaking point.

Almost anything you do involves heavy disk access. The Scratch disk holds the current state of the program and this is updated constantly. Each part of the program, and this seems also to include Menu selections, is layered in from disk. It takes some fifteen seconds whatever you do, so you must be careful not to make the wrong choice.

However, the strength of Publisher is the freedom it gives you to create text boxes of any size. You can enter text either into these boxes, or into predefined columns on the page. You can have up to nine columns, and these can either be of equal width, or adjusted individually. Text flowed into the page will automatically flow from one column to the next and will add pages as necessary.

You enter pictures, which includes rules and other lines, into graphic boxes. These can also be drawn to any size and mixed with text boxes on the page. There is facility to send a box either in front or behind any overlaps.

Having defined the page, which is done on a 'reduced to fit' screen, you must then goto either the Text edit screen or the Graphic screen to work.

### The Text Screen

It is here that you edit and import documents. The screen gives you only a portion of the page displayed at actual size. However, you can edit and enter text in the usual way. There is a 'select document' command, that allows you to do global changes to point size or leading. This was where I waited longest, 5 minutes to change to 9pt on one A4 page. Most things work as you would expect, including cut and paste, albeit very slowly, but inexplicably, the cursor keys are not active! Everything has to be done with the mouse. For those without a mouse, you press down the Closed Apple key and use the cursor keys. This moves the I beam instead of the flashing cursor position, so you must still select the active position when you finally get there.

You can select from either Gothic, San Serif or Serif typeface, and in sizes from 9pt to 24pt. There are an additional ten fonts available as a supplementary disk. These fonts are

not standard, and you cannot use normal fonts instead. They approximate normal fonts but are not quite the same.

There is a disk of Style Sheets available to go with Publisher. This gives you 36 prepared pages, each having a different selection of columns and boxes. You could of course prepare your own in advance if you wished.

### The Graphics Screen

This is perhaps the oddest piece of Publisher. It is a very good copy of MacPaint, and is in fact a very powerful drawing tool, but it is practically of no use at all when it comes to the everyday things such as drawing rules into column breaks.

There is a single step 'zoom' which gives a 'Fat Bits' display, and all the usual things from the MacPaint menu. However, it can only draw into a graphic box and this is where the real limitation lies.

You can either draw yourself directly into this box, or import from a Dos 3.3, ProDOS, or Clip Art disk. The imported drawing may be sized and then of course further drawing may be done.

As a general drawing program, it is limited in that it is of course in Black and White only.

There are a range of Clip Art disks available covering different subjects. Many of these have drawings similar to those available with Newsroom.

### Printing

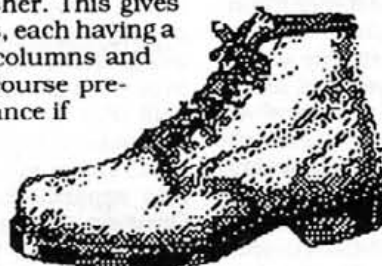
I did not have the Laser Driver, and so was unable to test Publisher this way. I suspect that it would be difficult to predict where things would be on the final sheet, as the non-standard

fonts would not match the Laser output. This would be a severe limitation to using the high quality of the Laser-Writer for output. I also assume that drawing would be sent as 'bitmapped' images rather than Postscript drawings, and again would not match what you saw on screen.

I tested the printing on an ImageWriter, and was disappointed in the results. Both Publisher and Publish It! use a double pass of the print head in 'best' quality mode. However, Publish It! draws the information between the dots on the second pass, and Publisher simply draws the same line twice. The result is a 'near letter quality' from Publish It! and a chunky, inferior result from Publisher.

Publisher also seemed to give ex-

cessive pauses while it drew text into memory prior to printing. Publish It! on the other hand is printing almost continuously and took only a fraction of the time to print a page.



### The speed problem

Diagram 1 shows the timings I achieved when preparing a 3 column A4 sheet at 9pt text. These are all the steps one would expect to follow in producing such a page, and so it will give you

an idea how long it all takes. The actual steps in preparing a page with Publish It! are slightly different, but the timings to produce essentially the same page are given in Diagram 2.

### Conclusion

It will be apparent that I do not think Springboard Publisher is a program worth buying. It only outperforms Publish It! in very minor ways, and these in no way offset the limitations imposed by its slow performance, its limited fonts and its poor printing.

As one of the editorial team of Apple2000, I feel it is important that reviews such as the one I have just given are published. I feel that an honest review should show a program for what it is worth, warts and all. I hope that this review has been both instructive and informative, and will have been educational as well. Timings are given on the next page.

I rest my case ....




Ewen Wannop



Springboard Publisher Program	£97.99
Additional Fonts	£27.95
Style Sheets	£27.95
Clip Art disks Assortment	£29.95
Clip Art disks Education	£29.95
Clip Art disks Holiday	£29.95

info

Product : Publisher  
 Publisher : Springboard  
 Available from :  
 MGA Microsystems  
 Pear Tree  
 Appledore  
 Kent TN26 2AR  
 Tel 0233-83571  
 Price : £97.99 inc VAT

Value :   
 Performance :   
 Documentation : 



**Diagram 1 Springboard Publisher timings**

Action	Slow (1)	Fast (2)
Import 4.5K text and select output file	3'30"	1'10"
Goto Text Screen	1' 0"	12"
Highlight all text	15"	4"
Select Font Formats Menu	45"	9"
Change to 9pt Serif	5' 0"	57"
Select Paragraph Formats Menu	55"	9"
Change to 0.25" indent 10.0" pt leading	3. 0"	36"
Select Column Menu	42"	6"
Change to 3 columns	1'47"	28"
Jump to see end of the A4 page	3'30"	1'54"
Unhighlight text	1'50"	28"
<b>Total</b>	<b>22'14"</b>	<b>6'13"</b>

**Diagram 2 Publish It! timings**

Select 3 columns from Menu	10"	10"
Set up 3 text boxes	10"	10"
Import file and pour into columns	51"	20"
Highlight all text	4"	4"
Change to 9pt Times	15"	6"
Display actual size	9"	4"
Change to 0.25" indent	12"	4"
Jump to see end of A4 page	9"	4"
<b>Total</b>	<b>2' 0"</b>	<b>1' 2"</b>

(1) Running at 1mhz entirely from 3.5 floppies

(2) Accelerated at 2.3mhz and running entirely from Ram

**HANDY TIP**

Here is a technique for playing all those Music Construction Set Songs, WITHOUT buying the program. First get yourself the Demo Music Construction Set (can be obtained free from dealers) and copy it across to a blank disk. The program appears to play a fixed number (9) of songs in the same sequence. All you have to do is replace those songs with your own, renaming them so that they match the original files. The music files and order of execution are as follows:

- 1) Leroy
- 2) Fantasy
- 3) Ubet
- 4) Canon
- 5) Ruddigore
- 6) Etude
- 7) Wacko
- 8) Italy
- 9) Scherzo

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**K John Kishimoto**

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# MacroTools

## MacroTools with Ultramacros V1.7 gives insight into what goes on in Appleworks. By Peter Davis

### For Non-Macro-Maniacs

Perhaps some of AppleWorks nicest features are the 30 or so OPEN-APPLE-APPLE commands, which must have been precursors of the many macro programs that have come on the scene.

Early Macro programs allowed you to create Macros which let you reduce a series of keystrokes in Appleworks down to a single-key-command combined with the SOLID-APPLE-KEY. The imaginative Macro writer soon ran out of keys to use, and to cater for this, the power of these programs was extended to enable the three applications to be identified so that the effective keystrokes in the Data Base would be quite different from those in the Word Processor. There was also a desire to control AppleWorks, so that for instance the macro would pause for user input, while at the same time a helpful message could be displayed on the screen. In this way macro writing ceased to be a simple matter of representing keystrokes, and include some of the characteristics of a tokenized programming language, having both logic and bells. By 'bells' I mean commands to access Prodos time or aids to enable a series of keystrokes to be recorded as a Macro.

I write this, while acknowledging MacroWorks, AutoWorks, Super-MacroWorks, and KeyPlayer. Even so UltraMacros, with AppleWorks 2.0, is without question the program with the most power and complexity that I know. The number of Macro Keys is 50 plus, achieved by enabling macros to be defined with SOLID-APPLE-KEY alone, or in various combinations with the OPEN-APPLE and CONTROL keys. Their usefulness is most likely to be limited by the users own memory and the difficulty of reaching several simultaneous keys.

Macros can be simple, word swapping would be a good example of the kind of thing that people have liked

to do at "the touch of key". UltraMacros is capable of far more than that. Take a look at a few statistics. There are 85 Tokens, the ability to handle 26 numeric variables and 10 string variables, and ability to manipulate these variables by sorting or by arithmetic. Superimpose these functions and capabilities within the AppleWorks environment where it becomes easy to move identified data between files and applications (including TimeOut applications) and I think it must be clear that this language is fully capable of greatly expanding AppleWorks capabilities in a quite radical way. Here are a few examples:-

A fully controllable Mail Merge is simple, (I have done it).

Additional functions can be added to the Spread Sheet. Natural Logarithms, Sin, Cos, Tan.

The number of calculated fields in the Data Base can be increased.

In UltraMacros programs are written using the word processor, then compiled in a form which is still accessible to the word processor. So editing is easy enough. MacroTools supplies a few more programing aids and examples.

The remaining part of this article is for people who are Macro-Maniacs, or better still for people who own or want to own UltraMacros.

### MacroTools creates UltraMacros V1.7

I was sent UltraMacros V1.7 and MacroTools V1.0. Ultramacros V1.7 has some significant changes from the version I purchased at the beginning of this year, and has a revised printed manual. The most obvious change incorporated is the addition of a new Token <asc> which converts a string character to ASCII, there is also a slight change in the mode of operation of <find>. There are a number of other

changes which make this latest version of UltraMacros sufficiently different for an upgrade to be mandatory for users of MacroTools.

Perhaps the most significant benefit of MacroTools is that it provides the means for owners of UltraMacros versions prior to V1.7 to upgrade a copy of their Ultramacros disk, then reinstall prior to working with MacroTools. In addition the default set of macros is expanded and MacroTools has a well edited addendum for the earlier UltraMacros manual.

MacroTools contains five new TimeOut applications intended as aids and enhancements for UltraMacros. The STARTUP procedure provides the means of updating UltraMacros disc, ie ULTRA.SYSTEM, TO.COMPILER, TO.MACRO.OPT. to version V1.7. (There was no detectable difference between version V1.7 and the my older version upgraded, except the dates). In addition the remaining part of the double sided disk is packed with technical information on AppleWorks and UltraMacros plus a raft of new Macros that are intended to expand your insight into just what can be done with powerful macro program. Even if you might not think of doing so in the first place you end up with the means of ejecting a 3.5" disc or searching for values or formulas in a spreadsheet. The disc also has a list of AppleWorks addresses that can be PEEKED and POKED from UltraMacros.

### The New TimeOut Applications

Once UltraMacros 1.7 is installed on AppleWorks, the new TimeOut applications:

TO.DEBUG,  
TO.MENU.MAKER,  
TO.FILE.STATUS,  
TO.TASKLAUNCHER and  
TO.UM.TOKENS

files can be copied to your TimeOut applications disk.

I found Debug the most useful of the five. It provides a good descriptive aid on the workings of UltraMacros and is a most useful debugging tool.

### UM Tokens

UM Tokens is perhaps the simplest. It displays an alphabetical chart showing all of the tokens that may be used with UltraMacros. Just press Open-Apple-Escape and select UM Tokens and the screen in Figure 1 appears.

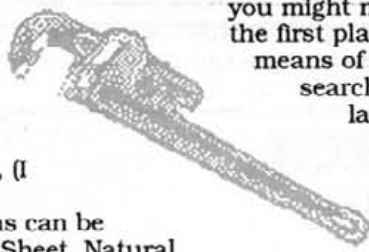




Figure 1

<adb>	<ctrl->	<id#>	<onerr>	<screen>
<ahead>	<date>	<if>	<path>	<spc>
<all>	<date2>	<ifkey>	<peek>	<stop>
<asc>	<dec>	<ifnot>	<poke>	<store>
<asp>	<del>	<inc>	<posn>	<str\$>
<ato>	<disk>	<input>	<print>	<tab>
<awp>	<down>	<insert>	<pr#>	<then>
<ba->	<else>	<key>	<read>	<time>
<back>	<elseoff>	<lc>	<recall>	<time24>
<begin>	<esc>	<left>	<rem>	<up>
<bell>	<find>	<=left>	<right>	<uc>
<call>	<findpo>	<len>	<=right>	<val>
<cell>	<getstr>	<msg>	<rpt>	<wait>
<chr\$>	<goto>	<nosleep>	<rtn>	<wake at>
<clear>	<hlight>	<oa->	<sa->	<zoom>

Copyright (c) 1987 by Mark Munz

"Next time that you get a compiler syntax error you can see what that problem token is really supposed to be called"; says the manual.

### File Status

File Status is another application by Mark Munz that displays the following information about the current Desktop file:

Desktop #: this file's number in the Desktop index

File Size: Desktop memory used

File Type: Adb, Asp or Awp

File is : New, Saved, Unchanged or Changed

When the File Status information is on the screen, you may press OA-C to change the status. Perhaps you inadvertently pressed a key while in a saved file, and then deleted the character. The status will now be "Changed", so use this application to change it back to "Saved". This will allow you to remove the file without being harassed by AppleWorks.

### Menu Maker

Menu Maker is a TimeOut application that allows macro programmers to create true AppleWorks menus by invoking a macro. Both the "numbered option" and "bottom-of-screen-question" styles are supported.

The menu items are taken from the UltraMacros strings; you are limited to nine items in an option menu and a maximum of eight in the question menus at the bottom of the screen.

It might be thought that there is a definite advantage here since the menu macro can call other macros which you might find it difficult remember without this sort of aid. Unfortunately I was not able to benefit from much in from this because the ones I find difficult to

remember would be something like BOTH-APPLE-CONTROL-Z, and it is just in this area that menu maker falls down.

To be fair Beagle advise you to avoid the use of BOTH-APPLE-CONTROL macros inside of any complex macros which use begin, rpt, or any of the conditional logic. But this is just the kind of logic required to drive Menu Maker.

### Debug

Debug is an outstanding TimeOut application designed to make TimeOut UltraMacros programs easier to write and understand. There are four options in this application. They are all useful and enable the user to see what the macro has done:

#### I. Vital statistics

Select this option to see a display something like this:

Sleep Macro

Name: Solid-Apple-B  
Wake at 12:02

Onerr Status

Off

Pr# printer: 0

Macros defined: 1

Macro table length: \$0007, 7

This allows you to verify that a <wake> command has been invoked, to see the current <onerr> status, to see which <pr#> printer is selected, and to see the number of individual macros as well as the number of bytes they use.

## II. View numeric variables

This option displays the current values for all 26 UltraMacros variables (A thru Z) and allows you to modify the values.

1. Select the option now. Values are shown as both decimal and hexadecimal.
2. Press "Y" to modify a variable. You are asked for the variable to modify.
3. Enter a variable from a to z and press Return.
4. Enter a value from 0 to 65535 and press Return. The display is updated.

This feature can be used to pre-define variables for testing a macro, or to see what values a macro has altered during operation. You can actually run macros from within this application, but you will not see values till exit and look again.

The manual recommends insertion <input> statements at strategic points in a macro. This allows you to single step through the macro by pressing Return; if you suspect a problem, enter Control-@ to abort the macro. You can then use Debug to see how the variables are defined at that point.

## III. View string variables

This is the string counterpart to the previous option and lists the contents of each of the 10 buffers \$0 thru \$9. Both II and III are useful to macro writers in that it is possible to see what is going on, and sometimes an important reminder that these buffers do not get cleared without precautions.

## IV. View macro names in use

When you want to add a new macro to your set, this option gives you a list of all macros as a list in alphabetized order to make sure the macro key isn't already in use. All macros for one key (both-apple or solid-apple) are be grouped together in the order they appear. Alternately all macro names and applications are shown in the order that they appear in the macro file. Control macros are indicated by "~"; for example, a global both-apple-control-a macro would be shown as "all:ba-~A". Macros with tokenized names such as <left> or <tab> are displayed as control codes; ie CTRL-H or CTRL-I.

### Task Launcher

Too many Macros available at one time become difficult to remember. The concept of having a special set of macros for a specific task, say Mail Merge, where a file is specially compiled for a limited but compli-

cated purpose is not new. One of the advantages of UltraMacros which is new, is the concept of compression of such a file as a "Task File (T.SYS)". Task Launcher is a TimeOut application that allows you to quickly change the active set of macros. It is similar to the "Launch a new Task" option on the Macro Options applications, but it is more specialised.

Macro Options searches the AppleWorks startup directory for task files and presents a list to choose from. Task Launcher simply offers you a suggestion (your default macros) and lets you either press Return to launch that set, or enter another task file pathname. Here are the advantages of Task Launcher:

1. It's small, so making it memory-resident only uses 1K of Desktop space.
2. It's fast, because it doesn't pre-search the disk for task files.
3. You can enter a complete pathname, which means that task files don't have to be on the AppleWorks startup disk.
4. It offers your default macros as a suggestion, so you only have to press Return to install your standard set. This also lets macro developers exit their custom macro sets by using "Task Launcher".

### Beagle make UltraMacros unnecessarily obscure with inconsistent syntax ?

Rather than give a structured description of UltraMacros syntax, the numerous examples are written in many different forms, which explore the rules to their limit. If you write your own macros, the compiler picks up or displays errors almost perfectly. It is easy enough to see where you go wrong, in most cases. Personally I found that an area that gave me problems were the rules for annotation, where the compiler will not pick up an error. Let me start with an example of what the manual says on page 28:-

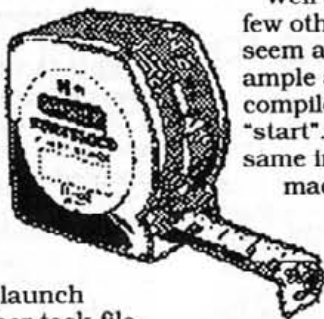
"For example two UP-ARROW commands followed by a LEFT-ARROW can be represented as <up><up><left>, <up up left>, <up:up:left>, or <up><up left>."

The Compiler also allows you to include comments between the <brackets>. Comments are surrounded by curly (brackets). The previous example could be include

an example like this:

```
<up:up:(this text gets ignored by the
compiler) left>"
the manual then goes on to say :
```

"Note: If curly brackets are not between TOKEN brackets they will get treated as normal text."



Well all this is true, but there are a few other rules which make this seem a little simplistic. The example above could only be compiled following the word "start". This time I will write the same instructions as a series of macros to illustrate where you can go wrong, and to make the point that carriage returns almost serve as well as Token brackets, colons, and

spaces:- (See the START Macro)

If macro C had been written with every token hard up against the left hand margin, it would not compile at all. The best general advice I can give is as follows:

- 1 Don't use more than one token bracket at the beginning of macro.
- 2 Apart from line 1, you need at least one space at the left margin to be safe.
- 3 Avoid using token brackets and colons except where they are necessary, and they are absolutely necessary following some tokens. msg 'string': must have a colon between it and the next token. print \$2: must also be followed by a colon between it and the next token. To get apparent keyboard input, the characters must be surrounded by reversed Token brackets >6<; colons, spaces and returns are not reliable.

### START MACRO

Start

```
A:<all><up:up:(this text gets ignored by the compiler):left>!
B:<all><up up (this text gets ignored by the compiler) left>!
C:<all
  up
    up
      (this text gets ignored by the compiler)
        left>!
D:<all up up : (this text gets ignored by the compiler) left>!
E:<all><up up> <(this text gets ignored by the compiler)> left>!
F:<all> up up : (this text gets ignored by the compiler) left>!
Macros A thru D compile fine.
A:<all><up up left>!
```

but the remainder produce very odd results just like:-

```
E:<all><up up spc spc spc spc spc spc spc spc left>!
F:<all> up up : (this text gets ignored by the compiler) left>!
```

4 One other exception; getstr 8 must have a space, (plus a rtn in the Data Base).

Finally I would like to finish in Figure 2 with an example of a real macro which forms part of my startup procedure, where I like to have 'name and address' Data Bases loaded as a routine matter when loading AppleWorks to / RAM7.

A few words of additional explanation. I have deliberately written the first line just like the book says, from there on what is there is a minimum. Note that each following line starts with a space. To get apparent keyboard input, the characters must be surrounded by reversed Token brackets; colons, spaces and returns are not reliable. (see 1, 2, & /first/data). The token <msg>"" must be followed by a colon. <clear> does not clear \$0, if you need to clear macro0, within a macro, set it equal to one of the cleared variables or from the keyboard use OPEN-APPLE— on an entirely blank AWP line. "End" is not compiled but it is detected by the compiler and I find it useful to include because compiling ceases.

There are 2 features of <find>, which you may not know about since they do not appear in the UltraMacros Manual. <find> will search a catalog for a file name in \$0 (macro 0) stepping downwards. It starts at the top and highlights each file name till that name is found. When the match is made the highlight remains where it is and if you have a second file to find, it will not work if it has already passed that name. If you want to find several, you have to be careful to present the request in the right order. The second feature which only appears in MacroTools, is that it is possible to assign a variable to



<find> and apply Boolean logic as is done in sa-ctrl-z.

The mechanism for the working of this macro may be clearer if rewritten using the <onerr> token which is presumably brought into effect by the error bell at the end of fruitless catalog search, as follows:-

```
<ctrl-Z>:call: onerr stop : z = 0 :
find : z = 1>! Onerr find also works
```

### What about the Notes and other aids.

Assistance in remembering macros in use is handled by TO.DEBUG "View macro names in use" function and in addition a DataBase file Macro List. This DataBase has the advantage that it also contains all the "New" UltraMacros Commands which are added to AppleWorks when UltraMacros is installed. This is a helpful and useful tool which broadly corresponds to the Default set of Macros which come with UltraMacros when it is first installed. Figure 3 shows the layout you get:.

### What about the Examples?

Of the 42 macro examples given, some of the examples are fully developed applications, there is even a sample of a complete set subscribed. However most were of the type designed to illustrate particular points where it would be for the user to take the ideas a few steps further. Others are lessons extended, further developed, or just more thoroughly explained than those given on the original UltraMacros disk. Even so there was enough new material to be absorbed to occupy me for some considerable time and add some very neat and elegant subroutines to my repertoire.

The full list is given in Figure 4 over the page, with a few comments:.

### Conclusion

You get UltraMacros updated and the DEBUG application is a superb tool for any serious macro writer, very definitely in the "Beagle does it again" class. Of the remaining applications only TASK LAUNCHER seems of real value. MENU MAKER is a good idea for handling some macro applications, especially if you use several Task Files to cover specific application areas, but regrettably I cannot see it really helping you much with the difficult-to-remember or finger-twisting Macro commands using 3 or 4 keys at once. The remaining TimeOut applications are strictly in the "not necessary" class.

**Figure 2**

Start

Macro L to load initial files with some checks.  
X file # corresponding to string variable locations \$1, \$2.  
Z is the variable assigned to FIND, Z = 0 not find, Z = 1 find.  
Note find is content of \$0

```
L:call : X = 2 : { declare variables & number of files to be loaded } :
$1 = "ADDRESS BOOK NC" { reverse alphabet order for FIND $0 first }
$2 = "ADDRESS BOOK CO" { because FIND searches Catalog down then stops }
oa-q esc<l>rtn>2<rtn up rtn { ADD "2" A Different Disk }
oa-Y/first/data<rtn rtn { clear buffer & enter new path }
begin { loop starts here }
$0 = $(X) { pass value to macro 0 }
sa-ctrl-Z { call another macro truth ZMM find, next line tests gives }
if z = 0 then bell : msg ' ' + $0 + ' not found ' : stop elseoff
right { if z = 1 then elseoff cancels condition; right selects file }
X = X - 1 { decrement X }
if X > 0 then rpt { test? for loop again }
else rtn { needs rtn to load files }
clear>! { Clears all variables except $0 }
```

```
<ctrl-Z>:call z = 0 : find : z = 1>! ZMM find protocol
```

end

**Figure 3**

File: Macro List

Page 1

Report: List

TOKEN	MNEMONIC	APPL	PURPOSE
OA-:	UC	All	Change character under cursor to UPPER CASE
OA-;	lc	all	CHANGE CHARACTER UNDER CURSOR TO lower case
OA-<CTRL>-W	Incr	All	Increment character at cursor
SA-!		All	Open DATEWORKS calendar
SA-"	Date2	All	Enter date in format 01/01/88
SA-\$		All	PRINT, Save, and Remove all Desktop files
SA-'	Date	All	Insert Date in the format December 29, 1987
SA-+	Time24	All	Enters time in the format 18:19
SA-, (comma)	Back	All	Jump to previous blank space
SA-. (period)	Ahead	All	Jump to next blank space
SA-L	Left	AWP	Left Justify (UNJUSTIFIED TEXT)
SA-M	Marker	AWP	Set Marker 254 in a body of text
SA-O	Zero	AWP	Indent Zero Spaces
SA-R	Replace	AWP	Replace Printer Options
SA-Y	Yp "Wipe"	AWP	Delete the entire line
SA-^	Caret Options	AWP	Jump to next ^ printer option

Of the information supplied PEEKS AND POKES provides an invaluable insight into AppleWorks as well as being a significant programming aid. On the whole the macros are for careful study, what you derive from them is will be ideas. A good deal of new ideas that I would not have thought up on my own. If you work at them, you can extend the capabilities of AppleWorks to meet your special needs.

If you really want to get the best out of UltraMacros, MacroTools is a big help.

PETER DAVIS  
SEPT 14 88



info

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**Figure 4**

File	Size	Note
Docs MacroTools	13K	Manual. Fairly good on the new TimeOut applications.
Macros SMW	2K	How to emulate some SuperMacroWorks commands.
Macros TaskExit	1K	Demo. How to use "Task Launcher" in a macro.
Macros Ultra	13K	Up dated version UltraMacros V1.7 built in macro set.
MacrosMenuOpt	3K	Menu Maker Demo full screen.
MacrosMenuQuest	3K	Menu Maker Demo bottom screen.
Moving.Macros	3K	Peeking Curser Position, then moving it.
Notes	8K	Ultra Macros Manual update.
Prog.Structures	3K	FOR NEXT emulation.
Some Ideas	2K	General comments on good, clear programming.
Trapping.Keys	2K	Loop to drive arrow keys + <wait> for key to abort with <esc>
Macro List	6K	Sample List of Standard Macros; useful.
Pecks and Pokes	2K	Very useful to any one writing macros.
Adding.Files	5K	Clever routine for adding files. Text files included.
ASP Conversions	2K	Alpha numeric conversion of school marks.
Bit.Testing	3K	Routine to erase programs poked to Page 3
Bug Chomp	4K	Manual for Game.
Bug Chomper.P	15K	Game Program (compressed)
ChemCalc	13K	Auto subscript & superscript, Molecular weights Calcs, & more
ChemDoc	7K	Instructions for Chem Calc.
Dir.Blks	3K	Read Directory & Calculate BLOCKS FREE.
Ejector	3K	Just what it says for GS 3.5" disk drive.
Ejector.Test	3K	Safe tryout, before you risk wiping your disk.
Ilgs ColorWorks	2K	Change colour on GS.
List Macros	2K	Emulate AutoWorks, Pinpoint KeyPlayer, SuperMacro::LIST
Macros AutoSave	2K	Use your clock to save each five minutes.
Macros DateSet	2K	Better explanation of Date Set routine.
Macros DB paste	2K	Copy 9 Data Base categories to AWP or ASP.
Macros Display	3K	Softswitch subroutine to Page1/Page2.
Macros FileRem	3K	Auto file remover when you add more than 11 or whatever.
Macros FLD.1.U	14K	Ira Liebermans Personal Macros, lesson not too many
Macros GlueLine	1K	Join lines.Read ASCII value under curser; surplus CR is cleared.
Macros Keypad	2K	Change numeric key functions on GS
Macros Link	5K	Better of UltraMacros example.
Macros OA	2K	Add O-A commands to Adding files
Macros Printer	1K	Solid-Apple-P and no change to AWP
Macros QS DB	3K	Transfer data AWP, spellcheck, send correct spell to ADB.
Macros Ray	2K	Save disc, override "delete old" routine
Macros ReadItem	1K	Read highlighted bit of Menu
Macros Strip	1K	Remove surplus spaces after sentence end & CR; (See GlueLine)
Macros Tab	3K	Decimal Tabs
Macros Tech	3K	Handy fast disk copy using FileMaster + hourly Auto-clock.
Macros.SpSearch	3K	Searches ASP for Values
MacrosAutoStart	2K	Task file startup
Mini.Desktools	8K	Calculate, encrypt, Clock
Misc.Macros	4K	Generic techniques, <begin>..<rpt> Loop, Word/letter swap, Kill file, no save, Error Bell tuning & duration, Divide with Mod, ZMM Find ZMM Find is one of the neatest routines used in MacroTools used again and again.

## Strip Non ASCII a Basic Utility from Bill Hill

```

20 REM PROGRAM TO STRIP NON-ASCII
  CHARS FROM A TEXT FILE ON DISK.
30 REM HIMEM IS SET TO JUST BELOW
  HGR1 PAGE SO THAT
40 REM THE TEXT CAN BE POKED INTO
  RAM ABOVE HIMEM,
50 REM WHILE THIS PROGRAM AND ITS
  VARIABLES RESIDE
60 REM FROM 2048 TO 8191.
70 REM NOTE THAT FRE(0) HAS TO BE
  USED TO STOP STRING SPACE
80 REM FROM BUILDING DOWN FROM
  HIMEM AND INTERFERING WITH
90 REM THIS PROGRAM.
100 REM By Bill Hill
120 CLEAR
130 HIMEM: 8191

```

```

140 INPUT "ENTER INPUT FILE NAME:
  ";FS
150 INPUT "ENTER OUTPUT FILE NAME:
  ";GS
160 ONERR GOTO 310: REM TRAP EOF
170 DS = CHR$ (4)
180 RS = CHR$ (13)
190 PRINT "PLEASE WAIT - READING
  IN INPUT FILE"
200 PRINT DS;"OPEN ";FS
210 PRINT DS;"READ ";FS
220 R = PEEK (49385): REM KEEP
  DRIVE MOTOR RUNNING
230 I = 8192
240 GET B$
250 F = FRE (0)
260 IF ASC (B$) < 127 AND ASC
  (B$) > 31 THEN POKE I, ASC (B$)
270 IF ASC (B$) = 13 OR ASC (B$)
  = 10 THEN POKE I, ASC (B$)
280 I = I + 1
290 IF I = 38400 THEN ERR = 1:

```

```

GOTO 310
300 GOTO 240
310 PRINT RS;DS;"CLOSE ";FS
320 IF ERR = 1 THEN PRINT "TOP OF
  MEMORY REACHED"
330 PRINT "NOW WRITING TO OUTPUT
  FILE"
340 PRINT DS;"OPEN ";GS
350 PRINT DS;"DELETE ";GS
360 PRINT DS;"OPEN ";GS
370 PRINT DS;"WRITE ";GS
380 FOR J = 8192 TO I - 1
390 P = PEEK (J)
400 PRINT CHR$ (P);
410 NEXT J
420 PRINT DS;"CLOSE ";GS
430 S = PEEK (49384): REM TURN
  DRIVE MOTOR OFF
440 PRINT "PROCESSING COMPLETE"
450 END

```

Bill Hill





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# Bus School

## Mix and Match Your 51/4 Drives

by Tom Vier (Open Apple Vol 1 No 11)

Contrary to what Apple would have you believe, all of its 51/4 inch disk drives - the older Disk II, the 51/4 inch Unidisk, the two-drive DuoDisk, and the IIC external drive - are essentially the same. Within certain guidelines you can mix and match Disk II's, the IIC external drive, and the 51/4 inch Unidisk (but not the newer 31/2 inch UniDisk) all you want, though some combinations require modifying the connector plug.

The controller card Apple is selling with the 51/4 inch Unidisk and the DuoDisk is like an old VW Beetle with a Continental kit. It's nothing more than a classic Disk II interface card with a new connector hanging off the back. The major difference is that the Disk II interface has two 20-pin header connectors, one for each drive, while the Unidisk/DuoDisk/IIC interface has a single, female DB-19 connector.

The drives themselves are also similar, except for the wrappers. The Unidisk has a permanent cable that terminates in a male DB-19 connector. On the back of each Unidisk there is also a female DB-19 connector. If you have two Unidisks, you plug the first one into the interface card and the second one into the back of the first. The IIC external drive is similar to a Unidisk, but since it will always be the second drive, it doesn't have a female connector on the back. The DuoDisk has a single female connector on the back and comes with a separate cable that has male DB-19 connectors on each end. One end of the cable plugs into the interface card, and the other into the DuoDisk.

The DB-19 connectors on the

Unidisk, DuoDisk, and the IIC external drives all share functionally the same electronic signals, or pinout. And these are equivalent to what's found on the Disk II's 20-pin header connector. The chart in Figure 1 shows what's where.

The two 20-pin connectors for drive 1 and drive 2 on the old Disk II interface cards are identical. All pin-pairs, in fact, always carry the same signals except pin 14. This pin activates the drive - a Disk II drive ignores all signals until pin 14 tells it to pay attention.

Unlike the Disk II interface, the Unidisk/DuoDisk/IIC interface has only one connector. If more than one drive is used, the drives are connected in a daisy-chain. Pin 17 carries the signal that enables the first drive in the chain. The interface card sends the signal that enables the second drive on pin 9. Inside a Unidisk, the signal from pin 9 is routed to the daisy-chain connector's pin 17. Consequently, all of the newer drives are electronically the same - each looks for its own activation signal on pin 17.

The IIC, of course, supports only one external drive. Pin 9 on the IIC is used for external interrupts. Pin 16, which otherwise carries a 5 volt supply of power, is unused on the IIC. This makes no difference because there is a second source of 5 volts on pin 6 - and inside all Disk II drives these two lines are tied together.

All this means that any Disk II compatible add-on drive, with a IIC adapter, can be daisy-chained off of a Unidisk or plugged directly into a UniDisk/DuoDisk controller or a IIC. IIC

adapters are readily available from several mail order houses (see the August issue, page 61, for the address of one). In addition, a IIC external drive plugs right into a Unidisk or a Unidisk/DuoDisk controller, and a Unidisk plugs into a IIC.

You can use the newer drives with an old-style interface card. This set-up would be most useful to people with special non-Apple disk controller cards, such as those with diagnostic routines on them.

While the pinout table given earlier makes it appear that building an adapter to go between the DB-19 and 20-pin header connectors would be a complicated soldering job, everything literally falls into place. The accompanying diagram shows how to make an adapter that converts a Disk II controller into a Unidisk/DuoDisk controller. Be forewarned, however, that a wrong connection could be very unhealthy for your system. Success would also be limited by your tolerance for the potential Radio Frequency Interference that could find its way around your house if you use unshielded cable, and by your ability to buy the relatively rare DB-19 connector.

Tom Vier



The above article, originally reproduced in Open Apple, describes how to hook up your 3.5 drives to an Apple II disk controller card. The astute amongst you will have already realised that the reverse is also true, that we can hook up a 5.25 drive to a 3.5 disc! However, for this to actually work, we must be connected to a Smartport such as that of the IIGs. Otherwise, the drives would not be seen to be in any slot that we could access.

I was curious to see if it would work, because if it did, it meant that I could hook up a 5.25 drive to my IIGs without opening the thing up and putting a card into one of the scarce slots.

It worked fine, and in fact it meant that I can put my 1 meg PlusRam into Slot 6. I then get the choice of a 5.25 drive when I need it, or the 1 meg PlusRam at

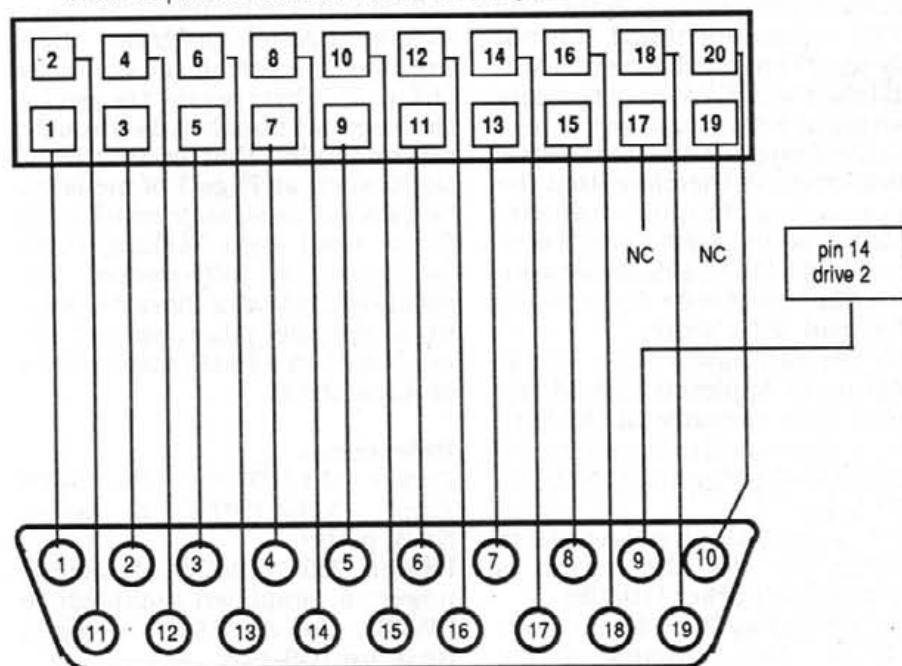


**Figure 1 - Apple II Disk Drive Pinouts**

signal	use	Uni-Duodisc IIc external	Disk II
GND	ground reference	1-4	1, 3, 5, 7
-12	-12 volts DC	5	9
+5	+5 volts DC	6, 16	11, 12
+12	+12 volts DC	7-8	13, 15, 17, 19
WRPROT	write protect	10	20
PH 0-3	stepper motor phases	11-14	2, 4, 6, 8
WRREQ	write request	15	10
ENBL	drive enable (low)	17, (9)	14
RDDATA	read data	18	16
WRDATA	write data	19	18
EXTINT	external interrupt	NA	NA
	not connected	NA	16

**Figure 2 - DB-19 to 20 way connectors**

Female 20-pin header connector for drive 1 or 20 way ribbon cable



Female DB-19 to 20-pin connector  
or Male DB-19 to 20 way ribbon cable

other times.

In the end, the most difficult thing about the whole exercise was soldering up the plug. The plug by the way is sold by Apple2000 from our Shop2000. Order as 656510 19 Way D Plug (Plastic Hood) at £2.50 each.

The diagram shows the interconnections between the DB-19 plug and the 20 way ribbon cable. The connections are the same as the article describes, just leave 17, 19 of the ribbon cable cut short, and pin 9 of the DB-19 unconnected. This will allow the daisy chain of a standard 5.25 Apple II Drive to the back of a 3.5 drive on a SmartPort.

If you are not very good at soldering, please let an expert do the actual wiring. You could

have a lot of dead computer and drive on your hands if you make a mistake in the fine wiring of a DB-19 plug!

Once it all is wired up, you access the drive from Slot 6. Drive 1. You will need to set the Control Panel to show Slot 6 as Disk Port.

There is one problem however, though this shows up very rarely. There is an actual hardware fault in many of the 3.5 drives. This does not show on the Macintosh, but sometimes causes both the 3.5 and the 5.25 drives to start up together. You must switch off to reset. No harm comes to either drive. Your dealer should be able to update your drive for you, or at least that is the position in the USA!

**Ewen Wannop**

## ProDOS and big floppy drives

I threw down the gauntlet when I mentioned reading and writing more than the normal 35 tracks on a 5.25 floppy. Peter Davis has kindly submitted the following piece from Open Apple September 1988.

### The Nibbler

**Dear Tom,**

The only reason ProDOS 8 and 16 won't read and write to high-capacity 5.25 floppy drives is that the ProDOS floppy driver checks the block number it's supposed to read or write before doing anything else. If the block number is over 280, the number of blocks on a standard 35 track floppy disk, it refuses to proceed.

Here's the code that does the check. If you BLOAD ProDOS 8 at \$2000, you'll find it in the vicinity of \$5800, but it moves around from version to version:

```

A5 46 LDA $46
A6 47 LDX $47
BE 56 D3 STX $D356
F0 09 BEQ --
CA DEX
D0 04 BNE --
C9 18 CMP #$18
90 02 BCC --
38 SEC
60 RTS
18 CLC
60 RTS
00 BRK
00 BRK

```

To use a 40 track drive, simply change the \$18 in the CMP instruction to \$40. This allows validation of 320 block devices. The changes for 80 track or 160 track disks are more extensive but not more difficult. The checking routine will grow a few bytes longer, but this we can neglect, because the bytes after the original routine are only unused BRK's.

80 track drives have 640 blocks. Insert an extra DEX after the one already there and move the rest of the routine one byte to make it fit. Change the CMP #\$18 to CMP #\$80. Presto, ProDOS allows to write and read 640 blocks.

160 track drives have 1280 blocks. We have to insert four extra DEX commands after the one already there (five total). Move the rest of the routine four bytes to make room. Change the CMP #\$18 to CMP #\$00.

The exact same checking routine is embedded in ProDOS 16. However, you can't load P16 into memory because it's too big. You can load sections of it with a command like BLOAD P16.T\$F9.A\$2000.L\$1000 however. In the version I have the routine starts at B\$5CC5.

**Udo Huth, West Germany**

# Using the RWTS to bypass the VTOC

## A simple approach to Disk Access on the Apple )( by Leonard E. Watson

Readers will be aware of the Apple ][s procedures for the reading and writing of test files on disk through the use of the familiar Print Chr\$(4)"Open"File\$ procedures used under DOS 3.3. However, there are times when one wants to access a disk directly, without using the normal file-handling routines. A case arose for me recently when I needed to be able to access data written by a word processing programme which did not use the normal VTOC.

In the Apple DOS Manual (pp.94-98) it is explained how direct access to the file manager within the disk operating system can be achieved. Unfortunately, although this works effectively enough, it is not easy to set up, involving as it does the creation of an IOB (Input-Output Control Block), a DCT (Device Characteristic Table) and a subroutine to control the whole thing. It's all a bit complicated and, as I suggest below, unnecessarily so.

Parker (1983a) has shown that if one executes a CALL 45073 in Immediate Mode with a disk in the disk drive, the first sector of the disk's directory is loaded into a fixed 256-byte buffer beginning at \$B4BB (46267 decimal). How can this fact be harnessed to solve our problems?

The secret is to convince the RWTS (the section of DOS particularly concerned with reading and writing to and from the disk) that it is to read, not the first sector of the Directory, but any sector predetermined by the user. The pointers to the tract and sector to be read are contained in memory locations \$B397 (45975 decimal) and \$B398 (45976 decimal) respectively: so doing so is just a matter of poking the appro-

priate values into these locations.

There is one further consideration which can be important. The RWTS routine identified can not only read from the disk: equally, it can take the 256 bytes in memory starting at \$B4BB and write them into the designated sector in disk! It is important, therefore, that the program's user be quite clear as to which it is intended to do! Location \$B041 (45121 decimal) contains the read/write instruction: 1 for read, 2 for write.

So one can now write a simple program in Applesoft to read any sector into memory at \$B4BB. This is illustrated in lines 10 to 70 of the BASIC program PRINTSECTOR below.

It is essential, after line 60, to include line 70: the reason is explained in Parker (1983b).

By changing line 40 to Poke 45121,2, the contents of the buffer at \$B4BB are written to the sector designated by SC and TK.

However, a further problem remains. While it is quite possible in Applesoft to use Peeks to read a block of memory, this is very slow. What is needed is a quicker way of making the contents of memory available for manipulation in BASIC. This is done in the attached Assembly Language program STRINGS, which puts the byte at \$B4BB into the string B1\$ and the next 255 bytes into the string B2\$. The reason for having to split the sector is, of course, that in Applesoft a string variable cannot contain more than 255 bytes. These strings can now be manipulated using Applesoft string functions (Left\$, Mid\$, etc.)

The Assembly program STRINGS (see Figure 2 overleaf) is called in PRINTSECTOR via the Ampersand function: lines 31 to 37 of STRINGS set up the Amper-

sand vector to ensure that when the Ampersand is called, the program will jump to the appropriate location in memory. As currently assembled, STRINGS is stored at \$300 (768 decimal). Lines 40 to 43 check that the format of the Ampersand expression in line 80 of the BASIC program is correct. (I am sure that the Assembler program could be written more tightly, but this is my first 'real' Assembler program, and it works!)

In PRINTSECTOR, lines 80 to 100 illustrate how the Ampersand routines can be operated from BASIC in order to print the values of B1\$ and B2\$ to the screen. This simple BASIC program then prints to the screen the contents of any 255-byte sector chosen by the user (although it is strongly recommended that certain locations, such as Page 1 of memory, be avoided, as strange results can follow from even Peeking some locations). A fully-worked example of the use of these routines in a specific situation will be published in a forthcoming issue of *Apple 2000*.

### References

- Parker, Bill (1983a), "The RWTS Trap", *Call-A.P.P.L.E. in Depth*, No.3, p.188.  
Parker, Bill (1983b), "Machine power: a simplified approach to RWTS", *Call-A.P.P.L.E. in Depth*, No.3, pp.108-118.

### Figure 1

#### PRINTSECTOR

```
10 TEXT:HOME
20 INPUT"Number of track
to be read: "TK
30 INPUT"Number of sector
to be read: "SC
40 POKE 45121,1: REM Poke
to Read rather than Write
50 POKE 45975,TK: POKE
45976,SC
60 CALL 45111
70 POKE 72,9: REM See the
note in the text
80 &R>B1$+B2$
90 PRINT B1$+B2$
100 END
```

Leonard E. Watson





Figure 2

```

1  * STRINGS
2  *
3  * by
4  *
5  * Leonard E Watson
6  *
7  * August 1988
8  *
9  * Assembled on BIG MAC
10 *
11 FRESPEC      EQU      $71
12 VARPNT      EQU      $83
13 CHRGET      EQU      $B1
14 AMPVEC      EQU      $3F5
15 CHKCOM      EQU      $DEBE
16 SYNTAX      EQU      $DEC9
17 PTRGET      EQU      $DFE3
18 GETSPA      EQU      $F452
19 MOVSTR      EQU      $E5E2
20 *
21              ORG      $300
22 *
23              LDA      #$4C
24 ; Initialise Ampersand vector
25              STA      AMPVEC
26              LDA      #<CHECK
27              STA      AMPVEC+1
28              LDA      #>CHECK
29              STA      AMPVEC+2
30              RTS
31 *
32 CHECK        CMP      #'R'
33 ; Check format of Ampersand
34              BNE      OOPS
35 ; If wrong, error
36              JSR      STRING
37 ; If OK, go to routine
38              RTS
39 ; Return to Basic
40 *
41 OOPS          JMP      SYNTAX
42 ; Syntax Error message
43 STRING        JSR      CHRGET
44 ; Create Ampersand strings
45              CMP      #207
46              BNE      STRING
47              JSR      CHRGET
48              PTRGET
49              LDA      #1
50              JSR      GETSPA
51              LDY      #0
52              STA      (VARPNT), Y
53              INY
54              LDA      FRESPEC
55              STA      (VARPNT), Y
56              INY
57              LDA      FRESPEC+1
58              STA      (VARPNT), Y
59              LDY      #$B4
60              LDX      $BBB
61              LDA      #1
62              JSR      MOVSTR
63              JSR      CHKCOM
64              JSR      PTRGET
65              LDA      #255
66              JSR      GETSPA
67              LDY      #0
68              STA      (VARPNT), Y
69              INY
70              LDA      FRESPEC
71              STA      (VARPNT), Y
72              INY
73              LDA      FREESPEC+1
74              STA      (VARPNT), Y
75              LDY      #$B4
76              LDX      $B4
77              LDA      $255
78              JMP      MOVSTR

```

0300: A9 4C

0302: 8D F5 03

0305: A9 10

0307: 8D F6 03

030A: A9 03

030C: AD F7 03

030F: 60

0310: C9 52

0312: D0 04

0314: 20 1B 03

0317: 60

0318: 4C C9 DE

031B: 20 B1 00

031E: C9 CF

0320: D0 F9

0322: 20 B1 00

0325: 20 E3 DF

0328: A9 01

032A: 20 52 E4

032D: A0 00

032F: 91 83

0331: C8

0332: A5 71

0334: 91 83

0336: C8

0337: A5 72

0339: 91 83

033B: A0 B4

033D: A2 BB

033F: A9 01

0341: 20 E2 E5

0344: 20 BE DE

0347: 20 EF DF

034A: A9 FF

034C: 20 52 E4

034F: A0 00

0351: 91 83

0353: C8

0354: A5 71

0356: 91 83

0358: C8

0359: A5 72

035B: 91 83

035D: A0 B4

035F: A2 BC

0361: AD 55 02

0364: 4C E2 E5

-End assembly- 103 bytes Errors 0

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# AppleSoft Statistics

## A review of AppStat by Mike Tickle

### APPSTAT REVIEW

APP-STAT consist of one 5-1/4" unprotected Prodos Disk, a neat clip binder, enclosing a clearly written manual.

Minimum hardware is 1 Apple II+, IIe, IIgs, 1 disk drive 80 col card in slot 3 printer in 1.

The programs are written in AppleSoft and therefore easily alterable. The disk is not bootable. After the usual copying and booting Prodos system master, typing RUN APP starts APP-STAT off. The manual is not quite correct in relation to the review disc as it says it runs under DOS33 then refers you to Appendix 1 to convert the disk to Prodos Format. There is no problem with this if you are used to the respective Op systems. My review disc was already a Prodos disk.

App-stat is menu driven with many options. Broadly the options can be divided into two areas. Statistics and Data Manipulation.

### Data manipulation using the Data Editor

A Statsoft file is logically structured into rows and columns called Cases and Variables respectively. I found the use of 'Variable' to describe a domain of numeric variables confusing because the manual also calls individual instances of a domain, a variable or a datapoint. I suppose this is all clear to a statistician?

You are prompted for the number of cases (rows) and the number of variables (cols) the file name if you are working with existing data and the name for the new file. Their new file example is 10 cases 3 variables. You are prompted to enter a value for Subject 1, Variable 1 (entry) Subject 1, Variable 2 (entry) Subject 1 Variable 3 (entry) and so on till all 30 values are entered. I suppose a subject is a case! You can hop about in the array by typing 999999 (six figure 9's)? whereupon you are prompted goto subject number? go to variable number? You cannot move outside the array. To finish you have to go to subject number 10 variable number 3 enter the value. Whereupon you are outside the array and may save or display as you wish. This is a very

curious arrangement, and after looking at the coding you will see there is no general input routine which traps ESC RNT O-9 A-Z etc.

Apart from the quibbles about the naming of parts and the entering of data the rest of the sub routines I tried work OK. This includes saving, reading, add or delete cases, add or delete vars, transposing, correcting and printing.

If I had a lot of data I would use Appleworks spread sheet to enter my data. APP-STAT can use non statsoft files i.e. Appleworks files. APP-STAT allows conversion in both directions. To import a file APP-STAT requires that the file consist of Ascii numbers only, each variable separated by a carriage return.

Printing was no problem. I have a Centronics 739 and a Gramm IPB printer card. Nothing special had to be done. Just switch on!

There is a facility for Transforming old variables or computing new ones. I did not use it but you are allowed to enter 100 formulas which look like Applesoft and then is 'exec'ed into the program.

$2501 D(1,10) = (D(1,1) + D(1,2)) / 2$   
RTN

You may use all the basic math ops and functions.

### Statistics

There is an example file which may be modified as above and used as appropriate in the numerous statistical routines. Although the manual explains in detail how to use the various programs, you have to know your statistics. Each program is described in terms of which formula are used with references e.g. T-Test (independent sample) uses the weighting formula to estimate the standard error of difference (see Hayes (1969, p316)). At the back of the manual are 8 pages of references.

A list of the routines follows:-  
Case selection conditions for descriptive statistics  
T-Tests independent or correlated,  
Correlation, ANOVA and Cross tabulations  
Bar graph and scattergram print outs  
NON PARAMETRIC STATS  
2 x 2 frequency tables

Expected vs observed frequencies  
Spearman R correlation  
Wald Wolfowitz 'Runs' test  
Mann-Whitney U Test  
Kruskal Wallis Anova by ranks  
Wilcoxon matched pairs test  
Descriptive stats, (incl. median, range, skewness and kurtosis)  
Multiple Regression  
Matrix inversion  
Saving predicted and residual scores  
Multiple R's approaching 1  
Stepwise regression  
Anova (Ancova) (one to four way).  
Repeated measures Anova

I checked out the Anova/Ancova program as follows

40 cases x 3 variables  
var 1 = similar/dissimilar  
var 2 = close / distant  
var 3 = dependent variable

The analysis of variance table contained exactly the same results figures as the same data produced on a Mac using an Open University owned program. As I don't think the programs were written by the same person, that must mean something. For the psychologists and social scientists amongst Apple 2000 readers. Friedman, Pages L Trend and Jonckheere Trend tests are not catered for.

### Conclusion

The numbers produced from given data appear to be correct and reliable. The design of the algorithms are verifiable as the manual contains a reference index, which is in addition to a table of contents at the beginning and normal index at the end. Apart from my niggles about data editing and input everything works as it should. I would expect to find APP-STAT in use in laboratory and teaching establishments, producing on the spot analysis at no great cost in terms of time, money or effort.

Mike Tickle



info

Product : AppStat

Publisher :

Available from :

MGA Microsystems

Pear Tree

Appledore

Kent TN26 2AR

Tel 0233-83571

Price : £115.00

Value :



Performance :



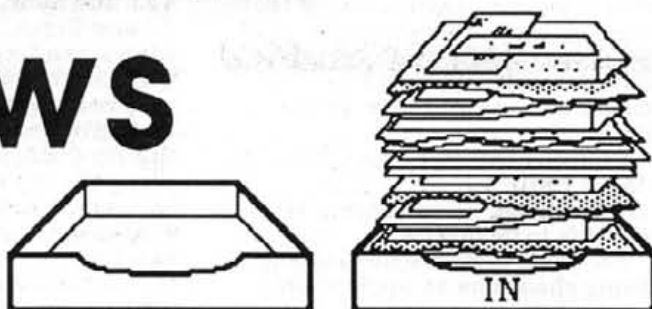
Documentation :





# HotLine News

Dave Ward



The ProDOS interface with Applesoft is BASIC.SYSTEM but just like any other program it contains some errors (bugs). One which I have met on occasion is the CHAIN bug where all ones variables become lost after chaining. Other members also seem to have had the same problem so it would be appropriate to mention the fix here. A patch to BASIC.SYSTEM was outlined in Open-Apple page 4.16 in March 1988 by Jerry Kindall. This problem occurs very infrequently when two pointers to Applesoft variable tables are separated by an exact multiple of 256. You might think that tried and tested programs should not be affected by this problem but unfortunately it is possible to create new variables within a running program at any time creating a time-bomb when you CHAIN to the next program.

The following two programs will enable you to test for the 'bug' in your particular version of BASIC.SYSTEM. SAVE the first program as CHAIN.TEST and the second program as TWO.

## CHAIN.TEST

```
10 X = 1.23456
11 D = 1
20 DIM A(46)
80 REM Program will not
chain properly as all the
81 REM variables are lost.
82 REM If you delete line
11 all is ok!!
99 PRINT CHR$(4) "CHAIN TWO"
```

## TWO

```
10 PRINT X
```

Both programs must be saved on a diskette, of course. When CHAIN.TEST is run you will chain program TWO which will print the value of X. Due to the bug all the variables will be lost and you will get a 0. If you delete line 11 from CHAIN.TEST and then RUN the program you will get the correct result printed by program TWO - 1.23456.

In the USA Apple Computer Inc. have released a new version of the Apple IIgs system disk version 3.2.

This has been described well in Open-Apple August 1988. The Apple IIgs system disk version 3.2 contains ProDOS 16 version 1.6, ProDOS 8 version 1.6 and BASIC.SYSTEM version 1.2. Unfortunately, however, the new version of BASIC.SYSTEM has not had the CHAIN bug mentioned above squashed which is a pity since its important. It is nice to know that the patch referred to above will also work with BASIC.SYSTEM version 1.2.

I'd heard from a number of different sources that Apple Computer (UK) would not be supplying this diskette because, it was rumoured, the much vaunted and long-awaited 16 bit version of ProDOS 16 was soon to be launched in the US of A. This, I thought, was another excuse by Apple Computer (UK) to 'sweep the Apple II under the carpet' after all they only appear to market the Apple IIgs over here and that in a very half-hearted way. I quite often receive comments from members that they are unable to obtain support for Apple II from Apple Computer (UK), even using the correct channels.

Perhaps I'm wrong. Lets hope so. Comments by at least 8 members indicate that Apple Computer (UK) are actually going to supply the new GS OS. This consists of two 3.5" diskettes. Ewen Wannop tells me that these two diskettes are available from the Apple IIgs library, so if you require a copy order it from us rather than direct from Apple Computer (UK).

These diskettes are not like the older versions of ProDOS 16 which you would either copy or just boot-up. You first boot the SYSTEM disk and then use the INSTALLER program on the SYSTEM.TOOLS diskette to install the system you desire on a disk of your choice, this is a point that I overlooked due to lack of documentation.

A new Apple II/c was launched in the US of A in September. It would be nice if Apple Computer (UK) could see their way to market it over here. The Macintosh is a great machine but is not appropriate,

mainly on price, for some offices where an Apple II with AppleWorks will work fine and at a reasonable price, too. Magazines published in the US of A tell us that the machine has an internal 3.5" disk drive an internal power supply together with a very much faster 65C02 processor giving speed increases of better than 300%. And there is more!

## Applesoft Screen Dump

A number of Apple 2000 members have, over the last 6 months, asked how it might be possible, from a running Applesoft program, to dump an 80 columns screen at any time. Beagle Bros. produced a ProDOS added command in their utility disk BIG U (See my review in Apple 2000 magazine June 1987 pp10). Whilst working on a review for the book "ProDOS Inside and Out" by Dennis Doms and Tom Weishaar I chanced upon an Applesoft version which is well documented. I have emended it somewhat so that it takes less space and is now a one-liner :-

```
100 PRINT "(^D)PR#1(^M)(^I)80N"
:FOR M=0 TO 80 STEP 40
:FOR N=1024 TO 1920 STEP 128
:FOR C=N+M TO N+M+39
:PRINT
CHR$(PEEK(49237)*0+PEEK(C))
CHR$(PEEK(49236)*0+PEEK(C));
:NEXT
:PRINT
:NEXT
:PRINT "(^D)PR#A49927"
```

(^D) = control-D which is equivalent to CHR\$(4)

(^M) = control-M which is equivalent to a carriage return = CHR\$(13).

(^I) = control-I which is equivalent to CHR\$(9).

{PRINT "(^D)PR#1(^M)(^I)80N"} Switches on the printer (ImageWriter) and then sets it to print 80 columns without echoing it to the screen.

{:FOR M=0 TO 80 STEP 40} The Apple II text screen is not linearly mapped but is divided into three groups of 8 lines. This points to the start of each of those three groups.

{:FOR N=1024 TO 1920 STEP 128} This points to the start of each line within a group.

{:FOR C=N+M TO N+M+39} The 80 column screen is really divided into two 40 column screens stored in different banks of memory. Along each line the characters are stored alternately in one bank then the other.

{:PRINT CHR\$(PEEK(49237)\*0+PEEK(C)) CHR\$(PEEK(49236)\*0+PEEK(C));} This is all one line. PEEK(49237) simply flips the soft-switch that says read the next PEEK from the

second bank. This is multiplied by zero since any value returned is irrelevant and the PEEK(C) gets the value of the character on the screen. CHR\$ converts it to a character which is then printed. The next section does the same job but PEEK(49236) simply flips the soft-switch that says read from the first bank.

```
{:NEXT} - Really NEXT C
{:PRINT} - Needed to cancel the ;
and print on the next line!
```

```
{:NEXT} - Really NEXT N
{:NEXT} - Really NEXT M
{:PRINT " (^D)PR#A49927"}
```

This is the clever bit that switches off your printer and then returns to the 80 column screen without erasing it. A simple PR#3 would erase the screen.

This one-liner could be entered as a subroutine in any Applesoft program but the variables might need changing to avoid conflicts. Remember that it only works under ProDOS. The version in "ProDOS Inside and Out" also works under DOS3.3.

#### ProSel again!

Dr Norman Cohen informs me that ProSel version 3.8 also contains a demonstration, on the back of the /EXTRAS diskette, showing off just what you can achieve with ProSel screens. For instance it is possible to create areas of pure text

anywhere on the screen. These are headings with a special code so that they cannot be chosen as applications. It is also possible to use mouse characters and inverse characters too. Unfortunately Glen Bredon, the author of ProSel, does not explain just how to do this. I have carefully examined some of Glen's screens and here are my findings :-

Control characters are defined as ^A for control+A etc.

^@ - causes all the characters on the title to be inverse.

^A - This prevents the heading being chosen as an application. Useful for writing text on screen.

^B - If this occurs in any title the bottom of the screen will be clear.

^C - this disables ESC and number keys if a ^C occurs in a title

^I - Switches on mouse chars.

^X - Switches off mouse chars.

^O - Switches on inverse chars.

^N - Switches off inverse chars.

Note that ^I is the same as ESCape key. Also before entering commands such as ^O, ^N and ESC you must prefix with ^O. Therefore to enter ^O you must, in fact, enter it twice !!! In fact the ^N etc. are commands in the ProSel Editor and the ^O overrides them.

I have, on occasion, used the flexibility of these screens to write letters to other ProSel users, where the diskette boots into the ProSel

screen which is the first page of the letter with just one application that runs the ProSel screen which constitutes the second page .....

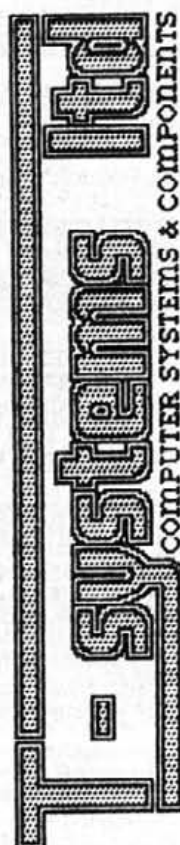
#### Mac Problem

Peter Kemp recently contacted me with a problem that he has been experiencing with a Macintosh. This involves printing a document to an ImageWriter printer where the first line on the first sheet is bunched along the top of the characters. It appears that this is a well known bug in the ImageWriter driver. Peter has recently obtained the version 2.7 of the driver but the problem still occurs. Can any member throw light on this and offer a possible fix.

#### ProDOS problem

ProDOS does not boot on the older 'clone' Apple // machines. This is because ProDOS checks the ROM in the machine to see what hardware is running it.. Cornelis Bongers and Wilhelm Schouten (Authors of Speedloader) experienced this problem with their BASIS 108 Apple //e clone and discussed how this may be remedied at the end of their article "ProDOS Pros and Cons" in Call A.P.P.L.E May 1984 pp51. This method is not simple and requires some knowledge of machine code.

Dave Ward



## Computer Consumables...

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Citizen 120D	4.05	Juki 5510/5520	3.15
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Epson LQ 500/800/850	3.35	Seikosha GP 100	2.40
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# PlusDisk SC

Dave Ward gives us a preview of a brand new storage device and a SCSI interface card

In the August 1988 issue of Apple2000 magazine I reviewed the Cirtech plusDISK battery-backed memory card for the Apple // range of computers with extension slots. In that review (see page 23) I made a prediction which I reproduce in the box below :-

If history repeats itself then the future for plusDISK type of cards is very bright, indeed. When Cirtech introduced its Flipper 1 megabyte card in 1985 an Apple-type memory card became affordable by most users. Since then the plusRAM cards have been introduced which are less expensive still. In general chips will get smaller have higher capacity and use less power as evidenced by the introduction recently of the Cirtech plusRAM 16 card. If the cmos chips used on the plusDISK follow the same route we could well be using high capacity battery backed RAM cards not too far away in the future instead of hard disk drives. Perhaps this might extend to a 'hard disk' box, contain many megabytes of cmos memory, that can be daisy-chained to a smart port or scuzzy device!

On returning the plusDISK I was informed that not only had Cirtech thought of the above idea but already had a product under development for the Macintosh which would make the market around October 1988. As Cirtech were also introducing a SCSI (Scuzzy) interface card for the Apple // range of computers with extension slots, we were loaned a 1 megabyte PlusDisk SC and a Cirtech SCSI interface card to try the system on Apple // computers. During the last two months I have been testing the setup on a variety of Apple // computers without any problems.

During the next few issues of the Apple2000 magazine we will be reviewing these products with the following emphases :-

- 1) Cirtech SCSI card for the Apple // range of computers with extension slots.
- 2) Cirtech PlusDisk SC for the Macintosh.
- 3) Cirtech PlusDisk SC with Apple // computers with extension slots.
- 4) Sharing PlusDisk SC with between Apple Computers.

Cirtech are to market or are even marketing, by this time, software to allow you to use a PlusDisk SC by two or more Apple Computers.

Like all Cirtech products the SCSI card is small and measures just 8.5cm by 7.5cm and contains just 7 chips. Two chips are socketed and one of these is an EPROM current version SC1.04.

The PlusDisk SC is an external box, measuring 14cm wide by 7cm high by 19cm deep. The necessary plugs and leads are provided to connect to your Macintosh. A transformer plug is also provided which with a lead that plugs into the back of the PlusDisk SC, this must always be connected during use. A little red light on the front panel of the PlusDisk SC shows that power is on. Access to the PlusDisk SC causes the light to dim! The big advantage of PlusDisk SC is that you can disconnect it from your Macintosh and the power supply leave it on the shelf for a couple of months, perhaps or connect it to another Macintosh. PlusDisk can be expanded up to 6 Megabytes. If you wonder how they get 6 megabytes of memory in such a small box, we can tell you that this is one of those occasions that the chips are stacked in ones favour!!

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**Dave Ward**



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# FR System

## A preview by Dave Ward

We will soon be adding the FR SYSTEM package to our special release software. This is a package of DOS3.3, Applesoft and Monitor enhancements by Francis Riley. This system gives Apple II plus and unenhanced Apple IIe users the opportunity to replace their 6502 micro-processor with a 65C02. We intend here to give a preview of the product with a full review to follow later. First, though, let's look at a resume of how the Author describes his product:

### Overview

FR-SYSTEM upgrades the APPLE II series of computers to use the CMOS 65C02 micro-processor, with enhanced Monitor, Applesoft Basic and disk operating system. Memory 64K required (48K if system in Rom) Hardware. Fr-DOS uses only 6502 op codes and will therefore run on any Apple II.

A CMOS 65C02 chip is required to run Fr-Monitor and Fr-Applesoft because these use 65C02 op codes.

A 65C02 is fitted as standard to the IIC and IIE Enhanced but needs to be fitted to original IIE machines.

The Apple II+ needs, additionally, a lower-case generator and timing chip 74HC175 which should be inserted at Mother-board location B1.

The 5.25" system diskette that is supplied quickly boots up installing FR-DOS and then RUNs the HELLO program. Like all DOS variants this can be any legal name when you INITIALise the diskette. FR-DOS uses only 6502 code and can, therefore, be used on any machine even the Apple II plus. So you can use FR-DOS without upgrading to a 65C02 micro-processor.

FR-DOS has been enhanced in

### Rommability

FR-SYSTEM (or FR-MONITOR alone) may be put into Rom.

Pascal, CP/M and Prodos are then supported. Putting the system into Rom is a good idea in the case of APPLE II+ and original IIE but is not worthwhile on the IIC or enhanced IIE.

### Software Overview

Lower-case may be used throughout for DOS commands, Applesoft commands, IntBasic commands, Applesoft variables, Monitor commands, DOS filenames.

CTRL-A allows lower-case input on machines which lack a lower-case keyboard.

Text page 2 is available in the same way as Text page 1  
7 New Monitor Commands, 7 New DOS commands 7 New Applesoft commands User-added Commands New options for standard Commands  
65C02 Disassembler and Mini-assembler

Cassette areas have been deleted.

Fr-Applesoft, Monitor and Dos may be run independently of one another.

### FR-MONITOR Commands/Features

ESC H(igh) Select page 2  
ESC L(ow) Select page 1  
ESC # Boot Machine  
R Resume (e.g. Basic program)  
" Enter text into memory  
! Set bit 7 of text, low.  
Reset/Pb0 Interrupt any software  
On CR Display 8 (16) Ascii chars  
S Search for bytes or string.  
All normal Monitor calls preserved.

### FR-APPLESOFT Commands/Features

Page1 Display, write-enable page 1  
Page2 Display, write-enable page 2  
New 1 Set page 1, adjust Pgmstart, New  
New 2 Set page 2, adjust Pgmstart, New  
Else If...then...else  
M. Enter Monitor  
L. Edit line with Insert, Delete  
' Alternative to Rem  
> Put machine code in Basic lines  
Hgr/Hgr2 New options  
Goto/Gosub New option  
Del New options  
Video Switch Normal/Inverse  
Bugs Various bugs have been fixed.  
Input Any string; num. errors trapped

Runtime errors marked and line presented for editing.

### FR-DOS Commands/Features

Improved Catalog  
Mon/Nomon may be used to set D,S,V.  
Two-disk search for files  
Boot file may be of any type.  
Filename 1st char - any non-digit.  
Smart Run Command  
Wildcard  
Revised Error Messages  
Cursor on Command that caused err.  
Hot Keys  
User-added commands

New DOS resident commands are:-  
-/CAT/RD1/RD2/CMD/HELP/  
../

All new features are available from within Basic programs.

many ways to provide users with many of the facilities found in ProDOS and many others too. First you can use both upper and lower case characters for DOS commands. You can use CAT instead of CATALOG, although both work. CAT is 'intelligent' in that if you have your 80 column screen activated the files will be listed in two columns, automatically. CAT also supports 'wildcards' and the ability to only list files of a specified type. CAT =demo will list all those files that end in demo whilst cat /a will list only the Applesoft files. Although FR-DOS does not support sub-directory files like ProDOS the



ability to use 'wildcards' in file-names allows a crude way of achieving this. For instance all your Applesoft BASIC programs could begin with AS: and all those Applesoft programs that you use for your accounting could be defined as AS:A/C: so if you want to list all your account programs just type CAT AS:A/C:= and there you are!

FR-DOS just like ProDOS has a smart RUN command - (dash).

The system diskette comes with a HELP command and a HELP FILE: - FR-DOS allows one to add new DOS commands with the greatest of ease. One the command HELP has already been added and you can request HELP on any subject which will, if it is available, be printed on the screen page by page. For instance type HELP 80 and you will get a little over 2 screens of information about 80 column cards in relation to the use of FR-SYSTEM. Type HELP by itself and the whole HELP FILE: will be printed and will constitute a manual if you switch on the printer first.

FR-DOS works well on all the machines that I have tested it and if you prefer to work under DOS 3.3 and variants you will find it an improvement over your old system. In the next few months we will provide a full review on not only FR-DOS but FR-APPLESOFT and FR-MONITOR.

Dave Ward



## The Nibbler

Condensed in size this month, but not I hope in quality, I am told my column has had to make way for more important articles!

John Lee tells me that a very new and important move has happened on the Force/Telecom Gold front. The ubiquitous FAX has spread so fast now, that it looks to be finally the nail in the Telex coffin. You are now able to send and receive Fax messages from your Force mailbox. When I first heard of this, I could see clearly how an outgoing message could be converted to a standard font and sent to a Fax machine. However I could not see how an incoming Fax could be received by my mailbox. A friend of ours in Telecom Gold thought there must be a row of little old ladies typing in the Fax displays as they came in, however on investigation he finds that they have written some clever OCR (Optical Character Recognition) software, and that an attempt

is made to convert the incoming Fax into plain ASCII. The cost of sending a Fax in this way is about 77 pence. For further details go to the Gold prompt and type INFO FAX. To send a Fax type FAX at the prompt.

By the time you read this, Ewen Wannop the Sysop of TABBS tells me that he hopes to have expanded the online storage on the system. If it all works, he will be able to store many more files in the libraries. This will probably mean that he will need to alter menus accordingly. The main provision of this change is to expand the Macintosh download area. He has felt for some time that the Mac members have been getting a raw deal on TABBS. A greater selection of files will hopefully be made available.



Remember that a Bulletin Board is a two way thing, and that you should contribute files yourselves. Ewen has made uploading invisible, to protect from Viruses, just leave him a message to say what you have uploaded and where, and he will do the rest. He will only consider Public Domain and Shareware programs.

I was amazed at the response to the Mac User show last November. The size of the show was overwhelming and with the hype of the Wingz stand and the Wingz paratroopers, it almost felt like being at the PCW show! Some of the sounds coming from the main hall were not unlike the games area of the PCW event. It only lacked the masses of kids to complete the picture.

I see that Aldus have not stood still. Hot on the release of Illustrator 88, we have the release of FreeHand II, where will it all end I ask ...

A very happy Christmas to you all, and I hope you have lots of new Apples in your stockings.

The Nibbler



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# SuperSonic Stereo HD-Mate

## A review of the MDIdeas card by Paul Warwick and a review of HD-Mate from Ewen Wannop

A few months ago I purchased the SuperSonic Stereo card for my Apple IIgs.

The SuperSonic Stereo card arrived in a well padded box accompanied by a sheet of instructions, a connecting lead and also a 3.5" disk containing demonstration software.

Before installation of the card in the GS two small shorting blocks must be placed on two 6 pin header plugs. The choice depends on where the output of your card is to be sent.

There are three alternative positions, LN, HI and LO.

LN stands for LINE OUTPUT and if you intend to connect the output of the card into your Hi-Fi system this is where the shorting blocks would be placed and the stereo output connector would be connected into perhaps an AUX input on your amplifier. The lead for making this connection, providing you have phono sockets on your amplifier, is supplied, but if like me you do not have your set up next to your Hi-Fi then you may wish to obtain a longer version of this lead. (Knowing Apple II owners you'll probably make up your own!)

LO stands for LOW output and should you happen to own some amplified speakers (Bose Roommates are recommended) or wish to connect the output of the card to stereo headphones then this is where the shorting blocks would be placed.

HI stands for HIGH output and this selection would be made if the card were connected directly to normal speakers. I did try this option but found that the output level was very low, and eventually I opted for the LN position and connected the output to my Hi-Fi System Amplifier.

There does not appear to be a recommended slot in which to place the card into. I chose slot 2 as I felt it unlikely that I would use the Stereo card at the same time as the Modem connected to Port 2. The instructions for installation are quite clear and I achieved the installation in a couple of minutes.

There is an External Audio connector on the GS motherboard and there is a connection from the Stereo card to be made to this point.

With the board installed the in-

structions recommend a final check of all the connectors, although I cannot see that you can make any mistakes.

With the Demo disk in the drive I switched on my GS, (the demo disk is in fact a PLAY ONLY copy of the Music

Construction Set from Electronic Arts). After booting up, the program plays a selection of songs but instead of through the small GS speaker, which I recommend you turn down from the control panel, your ears are entertained but a very full and impressive sounding musical medley which considering is only two instruments at a time is very impressive indeed.

TOWER OF MYRAGLEN uses the Stereo card to a great extent, doing battle with one of the monsters within the Tower can be quite an experience as the grunts, yells and screams come at you in stereo. Providing you have connected up correctly walking from one side of the screen to the other will give a stereo effect from the sound as the footsteps travel from one speaker to the other. The opening sequences from this program sent a shudder down my spine! But I won't spoil the fun for those contemplating the purchase of these items!!

The Music Works Studio also supports the Stereo card and makes this program better than it already is. An increasing number of programs being released for the GS are supporting the Stereo Card and in my opinion greatly enhances many of the programs.

If the software has sound output but does not support the stereo output of the card then the sound will emerge from only one speaker. I found the use of a mono switch on the amplifier improves the situation.

Something that is not mentioned in the manual is that you DO NOT need to set the control panel to see the card in a slot for normal playing purposes and therefore do not have to switch the card in and out via the control panel if you are using port 2 for anything else.

Next issue I will cover the SuperSonic Digitiser card from MDIdeas, which complements (and plugs into!) the Stereo card and allows you to increase your library of digitized

sounds to include anything you like!

Paul Warwick



### HD-Mate Pascal Disc Partitioning Utility

Now that Apple have decided on a standard block device for /RAM drives and SCSI hard discs, the preferred operating system is ProDOS. However some of us still prefer Pascal for its portability and power. The current version of Pascal is 1.3, and this version will see all these various devices quite happily. But for those of us who are hard disc owners, the choice is either a second hard disc, or only being able to use it for the one system or the other.

Those clever people at Cirtech have got round all that. Some time ago they brought us Uni-Mate to allow Dos 3.3 to exist on 3.5 inch discs, now they bring us HD-Mate to allow Pascal to co-exist with ProDOS on your hard drive.

The operation is so simple that only two pages of instructions are necessary. By following the instructions you create a file 'PASCAL3' in the ProDOS directory of your hard disc. This file must not be moved or destroyed, and in fact hides the partition that you have created. This partition can be made any size, and will be seen as two equally sized Pascal volumes. You must also modify a copy of your Pascal 1.3 startup disc so that it will recognise the partition. Once done, you may then boot from this disc. You must only use this modified Pascal with HD-Mate, but otherwise you use Pascal as before.

You can however copy all the system files into one of the volumes on the hard disc, and then simply boot into Pascal by running the file PASCAL3 from ProDOS.

I found the whole thing worked so transparently, that I was able to copy my Omnis files onto the hard disc and run Omnis from Pascal 1.3!

The only problem came when I wanted to remove the Pascal partition without destroying the rest of the hard disc. You are warned not to move or destroy the file PASCAL3 and that you should reformat the hard disc instead. In fact the solution was quite simple, I deleted the file PASCAL3 leaving a large hunk of the hard disc effectively missing. I then ran FIXCAT from BAG OF TRICKS 2, to restore the missing sectors, and incidentally restore quite a few more missing sectors that had accumulated on the disc!

HD-MATE consists of a 5.25 inch and a 3.5 inch disc, and comes in a neat folder complete with full instructions. It is a useful addition to your repertoire if you use Pascal. If you are a GS user, then it may be superfluous once we have a Pascal FST.

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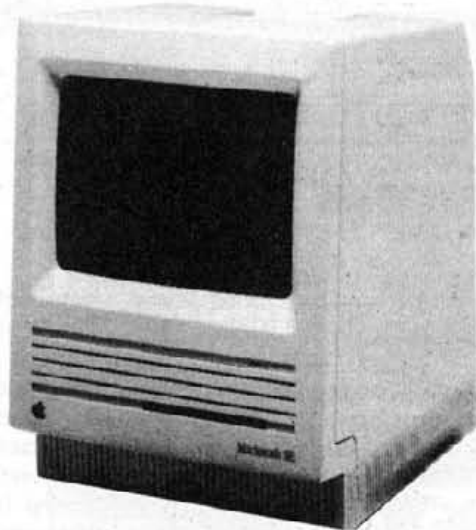
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# Dealer Profile

## MGA SoftCat introduce their people, products and policies

First of all; our thanks to Mick Knapp and Apple 2000 for this unique opportunity to let members know about our operation and how the Apple II fits into our future plans.

Old hands will know this company as Michael Gurr Associates or MGA MicroSystems (later), and may remember that we have been involved in Apple II products since 1979. Now a partnership between Jenny Green and myself, MGA has changed a lot over the years. As with so many microcomputer-based businesses, MGA shifted the emphasis from Apple II to IBM-PCs and on to even more powerful machines like Alpha Micro. I was accused of burying my head in the sand when trying to keep our small-turnover Apple II operation running in the background. In the end this difference of opinion caused such a rift that the company was split completely, with Mike Gurr returning solely to systems selling as Michael Gurr Associates (now based in Lancashire), while the MGA name moved to the new partnership which had UK Apple II users as its sole emphasis.

The MGA Apple II operation (it was successful and there has been no sign of a relapse!), now accounts for approximately two-thirds of our business, with the remainder being made up for by IBM-PC software and trade accessory sales. We sell virtually no Macintosh products but of course will supply almost anything if someone crosses our palm with silver. We look forward to continuing the supply of solid Apple II products like AppleWorks and Print Shop as well as a plethora of new products right into the 90s. We will keep finding

product just as long as you out there show us you want it.

MGA SoftCat is now based at Appledore in Kent, and we have become very much a mail-order business due to our lack of space and small staff. We advertise in every issue of Apple 2000, (now the only guaranteed source of Apple II info in the UK), and we urge you to encourage as many friends or colleagues to join the club as you possibly can. Our "update //" is a free newsletter which we mail to anyone who owns or uses an Apple II (if you don't get it, just give us a ring on 0233-83571). Planned to be published every 13 weeks, we will only manage 3 issues this year, but hope to do 5 or 6 next year.

The range of products we can supply is probably the largest ever offered in the UK. We list over 1000 Apple II products and can probably source another 1000 to special order. That is a lot more than any other company ever offered even in the heydays of 82-85 when Apple dealers actually sold Apple IIs! Most of our new enquiries come from people who have contacted Apple UK or a local Apple dealer only to be met by smart salespeople with images of wristwatch icons burnt onto their retinas (Macs can be slowwww), who shake their heads sadly as though you'd just parked an ark outside the showroom! Now you can't really complain about this because if a dealership is to be effective its got to know its products' capabilities and if it specialises in Mac stuff, it can't really be expected to know all about the myriad Apple II products.

There's absolutely nothing wrong with the Mac, and there's nothing wrong with Apple dealers

who don't stock or know anything about products for the II, it is, however, just a bit tough on the poor chap(ess) who's bought a II from from work (because their company just got 12 Mac/IBM/Olivetti/Compaq/Dell/Amstrad etc...). From that point of view Apple UK & their dealers have really done the dirty and left the old Apple II in the lurch. What's really made the problem worse is the fact that if you don't know about Apple 2000 you could easily think that there is nowhere in the UK to get anything for the Apple II series. The only other place I've seen anything at all is the occasional article on the IIGS by John Molloy in Computer Shopper. The rest of the UK mags just don't print anything so we've stopped sending them press releases. The Apple II is dead I guess.

Well, if the Apple II is dead - Long live the Apple II! We at MGA will be doing our utmost to ensure you get the products and support you need. You can telephone at any time to get any/all of the following publications entirely free of charge - AP PAK (Apple II, //e, //c & IIGS promoted products info), GS PAK, AP PPP (Apple II series mail-order pricelist), or our extensive SoftCat which contains illustrated narratives on hundreds and hundreds of Apple II products. We regularly carry a stock of 2nd-user goods and our up-to-date SOL (Special Offers List) can also be requested. Occasional purchasing of bankrupt stocks also means we generally carry quite a lot of "new" packages at drastically reduced prices, for example we bought over 600 games in the last four weeks to ensure you can get some realistic value this Christmas. Just ask for our XMAS PAK to check out the bargains.

Anyway, the very best seasonal greetings to all 2000 members go out to you from Jenny, Susan, Sue, myself, and of course; not forgetting Cleo, our famous black cat - not only is this our new company logo, but she really is a black cat who sometimes helps out in the admin office, confusing machine operators by daintily walking on their keyboards when their back is turned (how in heck did I get back to DOS? etc...).

Jon Gurr





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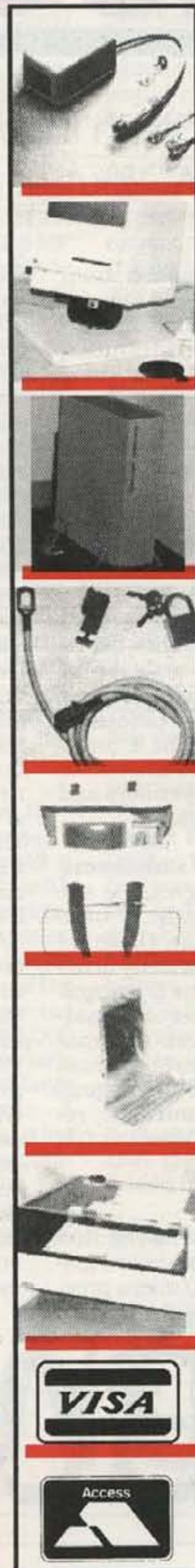
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# Macintosh Accessories



# MacChat

## Latest Macintosh II developments by Richard A. Young.

This file was downloaded from Info-mac and is reprinted here for the benefit of Macintosh II owners. (Submission and distribution of Info-mac digests is by network, moderated by volunteers at Stanford University.)

### Latest Mac II Developments Summary

A number of new products are being offered for the Macintosh II relating to high-performance CAD and vision applications, as well as interconnectivity issues to DEC and IBM computers. This INFO-MAC posting focuses on a recent trip to Tektronix to evaluate their TK88K-P concurrent processor plug-in board for the Mac II, and a visit to MacWorld Expo in Boston, which had about 150 vendors and 40,000 people attending.

### Mac II Performance Enhancers

Seven options for increasing the performance of the Mac II have been investigated so far. These are listed in the current priority order of their interest for our purposes. This list is still subject to considerable change as more information is obtained. Criteria are ease of programming and debugging, raw speed, cost, intrinsic research interest, and meeting GM divisional needs.

#### 1. TK88K-P Board.

Tektronix has produced the first commercially available board featuring the new 88100 microproc-

essor chip from Motorola. This reduced instruction set computer (RISC) chip features one step per machine cycle and a full 51 instructions, which is much larger than other RISC chips. Its specs place it in a class considerably above other currently available RISC chips such as the SUN SPARC, AMD29000, and MIPS R2000. It is currently clocked at 20 megahertz, which produces 17 MIPS or 6 megaflops (MF). For comparison, our tested LINPACK results on the Mac II by itself rate it at 0.054 MF, with the MicroVax II at 0.13 MF, the SUN 3/260 with floating point accelerator at 0.46 MF, and the Cray X-MP-2 at 24 MF. In addition to the 88100 chip, the board has three cache memories of 32K each, and 8 megabytes of on-board memory.

The complete board sells for \$15,000, or \$2500/MF. This compares favorably with the Mac II alone at \$91,000 /MF, the SUN 3/160 at \$111,000/MF, the MicroVax II at \$138,000/MF, and the Cray X-MP-2 at \$708,000/MF. (These are rough ballpark estimates only).

The TK88K-P board works in a co-processor fashion with the Mac II 68020, which does user interface and disk and screen I/O. The board currently supports a C compiler and plans are under way for Fortran. Three OEM's are looking at Unix for workstations based on the 88100, within a 6 to 12 month time frame. A Unix port to

their board would not be difficult as soon as someone does it once for the 88100 chip. Since the Lightspeed C and Pascal programming tools available for the Mac II are (in my opinion) superior to what I have seen in the Unix (or any other) programming environment, it would not be necessary to wait for the complete Unix workstation, but it is an important feature that it will be available later for those who wish to have a Unix environment.

Our internal extensive C benchmark timing program ran on the board without modification. Times were 6 to 700 times faster than the MicroVax II, depending on the operation. For example, evaluation of  $a = b * c$  for type doubles was 10 microseconds on the MicroVax II and 0.016 microseconds on the 88100 or 600 times improvement. Evaluation of  $a = b + c$  was 9.77 microseconds on the MicroVax II and 0.016 microseconds on the 88100 or 84 times improvement. The MicroVax II is about equal in speed to the Mac II 68020 or Intel 80386 (IBM OS/2). In the coming year, Tektronix has a number of projects to provide further enhancements.

Consideration has also been given to the TK88K-P board by Automatrix for their AI-90 industrial vision computer based on the Mac II and so offers potential leverage if needed.

#### 2. NuVista board.

It has Texas Instruments TMS34010 Graphics System Processor (10 MIPS), which is C programmable from MPW, the Macintosh development system. With 4 Mbytes of on-board memory, it will be \$5995, with October availability. TrueVision, 7251 Shadeland Station, Suite 100, Indianapolis, Indiana 46256. 317-841-0332. Advantages: On-board digitizer and display device, so no communications bottlenecks. Low cost. Disadvantages: ease of programming?

ABCDEFGH



### 3. Wytek chips.

Mercury computer has announced a 3-chip set for the Mac II with a stated 20 MF peak performance, priced at \$10,000. A C and Fortran compiler are announced. At \$500 per MF this would be the best price-performance ratio of any computer that I am aware. Their implementation of the Wytek chip set somehow gives them greater performance (at least in their claims) than the Wyteks used in the Sun. Advantages: high performance/cost ratio, high absolute performance. Disadvantages: ease of programming? (We await awaiting further information from Mercury now).

### 4. NuVision.

Perceptics Corp., P.O. Box 22991, Knoxville, TN 37933-0991. 615-966-9200. This extremely impressive system has a complete additional box based on the Texas Instrument TMS320C25 Digital Signal Processor, with an interconnect to the Mac II which is used for user interaction. It offers a complete, ready-to-use, image-processing environment with all the major image processing routines for under \$30,000. Its specs and price place it in competition with other vision workstations (e.g. Videk) costing 5 times as much. It is rated low in our survey only because there is concern about ease of programmability of the DSP chip. Currently, the only development language available on the Macintosh for the TI SDP chip is an assembler. If the C compiler becomes available as Perceptics has indicated, this option would rapidly increase in priority. We have many additional routines we wish to implement, and so ease of programming is an important factor in our research environment.

### 5. Souped-up 68020.

A 33 MHz replacement accelerator for Mac II - doubles Mac Speed by substituting a faster clock/

CPU chip - no other changes needed! Has a 32K RAM cache too. DayStar Digital, 5556 Atlanta Highway, Flowery Branch, GA 30542. Contact: Donna Smith, 404-967-2077. \$3K to \$6K, December, 1988. Advantages: low cost. NO additional programming required. ALL Mac applications are speeded up. Disadvantages: absolute speed-up of Mac II only by a factor of 2.

### 6. T800 Transputers.

Levco Inc. 6160 Lusk Blvd., Suit C-100, San Diego, CA 92121. 619-457-2011. These offer 1.5 MF per transputer, with 1 megabyte of memory = \$2400. Occam C runs on them, but development time would be increased because debugging tools are still limited. They are designed for parallel operation with easy expandability. A 20 transputer configuration in a Mac II was demonstrated at MacWorld, doing ray-tracing at about 1 second per 512 pixel line, which is about equal to Cray performance. Also MacBrain and Levco have teamed up to run their neural net software on the transputers. Linpack performance: 1 MFLOP/ transputer. Advantages: expandability to speed needed. Disadvantages: communications programming and debugging difficulties.

### 7. Apple 68030-based Mac II.

According to published reports (MacWeek, Aug. 8, 1988, p. 9) it has a 16 MHz 68030 chip, with incorporated memory management; a 68882 math coprocessor; 4 MBytes of memory; an 80 MByte hard disk; and the first use of the 1.44-MByte floppy. It is expected to be priced at less than \$9,000 and would be aimed particularly at UNIX users who require large memory and storage space. A 68030 upgrade board for existing Mac IIs is also expected to coincide with the release of the full 68030 machine. The board is thought to yield only a disap-

pointing 10- 20% speed improvement over the 68020, due to a data caching facility. Not a viable option for what we want.

### Other Options.

A completely different option is to purchase a 80386-based box and add in a Mercury array processor which uses the Multibus, but this would not offer ease of programming and reliability of the Mercury array processor is uncertain. Another possibility is to add a special purpose hardware plug-in card to do a single vision application for factory application. This would offer speed and low cost after development but not generality and adaptability.

### Other Products Seen at MacWorld Convention Digitizers.

At least five companies are offering video digitizer boards for the Mac II. The only one without flicker of the text and full 8-bit capability on R, G, and B and overlay was the NuVista board (see option 2 above) by TrueVision (an offshoot of AT&T). It has full gen-lock capability, and four 8-bit flash a/d converters on input and four on output.

TrueVision also sells their VID I/O box which also has conversion of Analog RGB to NTSC for recording purposes (\$750).

### Image Processing.

Digital Darkroom from Graphics Software (\$395) had an interesting and at times amazing set of capabilities to virtually duplicate all the common darkroom capabilities. For example, a picture with a blank sky was brought in, the sky (which was in multiple pieces, interrupted by trees) was segmented by automatic grey level, a picture of clouds was brought in, and pasted only in that grey level - so clouds were added to the sky, in a few seconds.

### Scanners.

IJKLMNOPQ

Apple announced its new scanner. It is only 4 bits (16 gray levels). Several nice software interfaces including one to Hypercard were available. A new low-cost 300 d.p.i. R,G,B full 8 bit on each channel scanner was announced by Sharp (JX-450 and JX-300, Sharp Plaza, Mahwah, N.J. 06430-2135, 201-529-8200). Its picture quality is excellent.

### Neural Networks.

Neural network products now available for the Mac II include The Cognitron (\$600, Cognitive Software), MacBrain 1.2 (Neuronics), with NX parallel processors (\$4150, Human Devices, based on Levco transputers).

### CAD.

Swivel3D from Paracomp was a real show-stopper. It has "tweening" commands that interpolate in time between two views to create animation sequences, and allows any of its parts to move with separate motion paths for individual objects. Five rendering modes are available. These CAD products offer fast development and easy conceptualization but their performance is not yet up to full CAD development stations. A number of vendors are offering interface and file conversion from and to larger workstation CAD systems. The Fall 1988 Mac Buyers guide compares 10 CAD packages for the Mac II.

### Color Printing.

At least six companies now offer color printers, including Tektronix, Seiko, Sharp, GCC Technologies, and QMS. Avalon Development Corp. announced a \$695 color separation package that converts RGB to a color-corrected CYMB system for color printing, a process previously requiring color separation hardware costing \$100K or more. Disk Drives. CDC is offering 300-MByte and 600-MByte Wren V

disk drive.

### Program Development Tools.

MPW 3.0 is making strong efforts to attract the Unix base of programmers. C++ from AT&T will be part of the next release, and all the Apple object libraries in MacApp will be fully accessible from C++. APDA the Apple Programmers Development Association is selling t-shirts with the object definition of a programmer:

```
TProgrammer = OBJECT(IHuman)
  fNeedsCaffeine : BOOLEAN;
  fReadsThings : BOOLEAN;
  fKeepsOddHours : BOOLEAN;
  HasPocketProtector : BOOLEAN;
```

```
FUNCTION TProgrammer.Eat(Junk
: Food): SIZE; OVERRIDE;
FUNCTION TProgrammer.DealWith
Humans; OVERRIDE;
FUNCTION TProgrammer.Collect
TechnoJunk;
END;
```

### 3278 and 3279 Terminal Emulation.

Avatar technologies, Inc. offers hardware/software communications products that work in conjunction with Avatar's standard Host File Transfer software on IBM (CICS, CMS, or TSO formats, \$500) to transfer text files between the Mac and IBM host network. If we already have IND\$FILE file transfer module then this \$500 purchase is not necessary. Also only 1 copy of the IBM software is needed per mainframe. MacMainFrame II (\$995) software and hardware (this hardware card has the Type A coax cable connector for the IBM right out the back of the card) package connects the Macintosh II directly to an IBM 3270 network and allows 3278/9 emulation with powerful file transfer capabilities and user-selectable color support on the Macintosh. In other words, you can remove the 3279 terminal off your desk (\$1500) and use their MacMainFrame II and "put a

mainframe in your Macintosh." You can also do file transfer from the IBM, and use the powerful Macintosh editing commands to insert directly into your application, which you cannot do with the 3279 itself. MacMainFrame DX (\$1195) is an external hardware box and software package that provides local or remote connection of any Macintosh to a 3270 network. This is needed only if we need remote connectivity and if we do not already have a cluster controller, which we have already at GMR, so MacMainFrame DX would not be necessary — only MacMainFrame II (\$995). Avatar Technologies, 99 South St., Hopkinton, MA 01748. 617-435-6872. On one side of their house they have a series of boards which uses protocol converters to do printing. However, this is a completely different side of their business which specializes in Macintosh and IBM connectivity.

### DCA

(Digital Communications Associates, 100 Alderman Drive, Alpharetta, GA 30201, 404-442-4000, Version 1.1, \$1195) also has a product called MacIrma that is a competitor. The important difference is that Avatar has had the DX Product for three years, and they feel that their product is more developed and more Mac-like in its interface. Also they have an API or Applications Programmer Interface, so the application can be customized on the Mac side, and the API will also support the Mac WorkStation product, a set of programming tools from Apple which allows direct access to the host IBM machine.

Also available is the MacBlue/3270 IBM 3278 emulator (\$95) from Wall Data, Inc. which requires their Wall Data protocol converter (6 ports, \$3995, 10 ports, \$4995, 18 ports \$5995). Wall Data, Inc. 17769 NE 78th Pl.,

RSTU VWXYZ  
Alphabet ©1987 enzan-hoshigumi co.,ltd.



### Vax Connectivity

The Alisa and Pacer products were reviewed. The Pacer products seem to have more functionality. The Alisa products allow the Vax to print over the Laserwriter connected to AppleNet. The Pacer products keep the print server on the Vax and allow you to hang your Laserwriters off the Vax. The Pacer Products have a built in terminal products allowing multiple terminals to be open at once. It seems to offer more features than the VaxStation II even. DEC is reportedly considering purchasing the Pacer software solutions for its own system, according to a recent article in MacWeek: "Sources close to Digital Equipment Company say the computer giant, Apple's strategic ally in the mini and main-frame computer world, is close to acquiring licensing rights to the networking software line of Pacer Software, Inc. a leading Mac-to-Vax company." Also, "PacerShare is considered by DEC developers as the premier software package for converting a VAX into a file server on an AppleTalk network. PacerLink provides communications between a Mac or IBM PC and host computers, including DEC VAX/VMS, Stratus, and most UNIX systems. PacerPrints is a VMS service for PostScript printers." In my own viewing of both Alisa and Pacer products, the Pacer products seemed to have more functionality, although the price was somewhat higher.

A complete Pacer system is about \$5K, including virtual disk ability. This is an excellent idea as full MAC backups can then be done to the Vax over Ethernet. Pacer Software, 619-454-0565.

### Other

Kodak offers a liquid-crystal Projection Pad for use with Mac+ computers for about \$1500. It sits on top of an overhead projector and shows excellent high-contrast images of the Mac screen as large as the viewing area of the overhead projector. The image may not be polarized, so this would unfortunately not be suitable for our application. Further investigation of such projection pads from other companies will be

done, but unfortunately the Kodak one is reportedly the only one that gives black-white, which we also need.

### Future Directions

CD-ROM drives will prove to be a major means of storing and displaying information. A new form of "home entertainment center" based on interactive computer-controlled CD-ROM video may well be the next major consumer product to be widely accepted in the home (potential market = 98 million homes with TV, much larger than the potential market for home computers, which is only 2-3 million), particularly as prices of CD-ROM drives fall below \$1,000 in the coming 2-3 years.

### Videoworks Professional

(\$695, MacroMind) promises to be the premier animation program for the Mac II. It allows specification of multiple knot-points in time, with selection of the type of curve to draw in time (linear, spline, etc.) to connect the views in space.

### Other Info

Corporate Macs: Kodak now has about 65,000 Macintoshes (all sites); GE about 6,000; Hughes about 1,800 (33% of all PC's); EDS in Southfield, 380 (92% of all PC's!). University of Michigan topped single-site list at 6,000 Macs (50% of all PC's). On the low end, IBM has 4 Macs.

**Note:** All the comments in this posting reflect my personal view and do not necessarily reflect the views of GM. Also I have no commercial interest or holding in any of these products or companies.  
from: Richard A. Young  
YOUNG@GMR.COM  
Computer Science Department  
General Motors Research Labs  
Warren, MI 48090-9055

### Info re SUM™

In the October issue we published information furnished to us by Symantec Corporation about the product known as Symantec™ Utilities for the Macintosh™ or SUM™. In line with information received from Symantec Corporation we stated that as an introductory offer with the first 5000 units of SUM™ that are sold, buyers

can receive a free copy of either Symantec's LaserSpeed™ or HFS Navigator™.

Please note that we have been informed by MacSerious that this offer only holds true for the USA market and not for the British market.



Alphabet ©Enzan-Hoshigumi Co

# MacCalligraphy™

## A review of the India Ink Application for the Macintosh by Norah Arnold.

MacCalligraphy™, by Enzan-Hoshigumi Co., of Tokyo, Japan, aims very high in attempting to provide graphics software that is so expressive and sensitive that it is able to simulate the act of Japanese ink painting which is usually done on absorbent rice paper. In the East, calligraphy is the art of writing Japanese or Chinese characters and the distinction which we have in the West between writing with a pen and painting with a brush is somewhat blurred in the East because, in Japanese, the word for 'writing', *kaku*, is the same as for 'painting'. Brushes are used for both painting in ink and for writing the traditional Japanese and Chinese characters.

When painting with the brush on the absorbent rice paper, called *washi*, the ink first flows freely into the paper then, as the artist relaxes the pressure on the brush, a 'tail' is formed. The appearance of this tail depends first of all on the type of brush which the artist has chosen to use, and secondly on the exact manner in

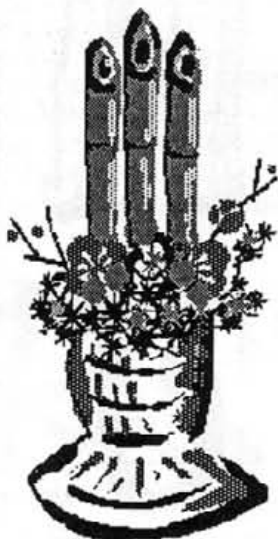
which the artist releases the pressure of the brush on the paper. The degree of absorbency of the rice paper will also affect the final appearance of the work.

The brush, the ink stick, the ink stone and the paper have traditionally been looked upon as the 'four treasures of the studio' and they represent the four basic necessities of the artist who wishes to paint in shades of black. These have been provided in MacCalligraphy and may be seen in the 'Tools' area on the right hand side of the work screen, when the MacCalligraphy icon is double-clicked. The first tool is the brush, and a total of six brush sizes are provided and can be selected for use by clicking on the appropriate brush size icon. The program defaults to the largest brush size when MacCalligraphy is first started up.

The next two tools, the ink-stone and the ink block, have to be



used together. To make black ink in the traditional manner, the stick of solid ink is rubbed in water on an ink stone, which should be extremely smooth and hard. Ink is rubbed from the stick by the grinding action and the longer the rubbing is continued the darker the ink will be. Within MacCalligraphy, the user can either simulate the traditional preparation of the ink by using the mouse-controlled ink block to draw ink from the ink well of the ink stone or they can use the faster method of using keyboard commands to predetermine the exact shade of ink to be used. The numeric keys are used to specify, for example, a 10% shade of black by pressing number 1, or various degrees darker, up to 100% black by pressing zero. White paint can also be used and can be used as



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Hoshigumi Co.



an eraser if necessary.

The next tool is the water dropper which is used to dilute the ink on the inkstone to a lighter shade. If shades of black are required between those specified by the number keys described above, then the water dropper is the tool to use to lighten the shade, whereas the ink block will darken it. The "" key at the far left of the top row of the keyboard is used to specify the use of clear water.

Instead of a normal selection marquis icon as in MacPaint and other programs, the scissors are used to depict the marquis, but the use of the tool is very similar.

Another tool is the Seal which is used to give an authentic look to work produced in MacCalligraphy. Traditionally, artists used their own seal, which often depicted their personal name written in Chinese characters, but the MacCalligraphy manual tells us that they often used to put the seals of their friends and admirers on their paintings too. MacCalligraphy gives the ability to design your own set of seals for

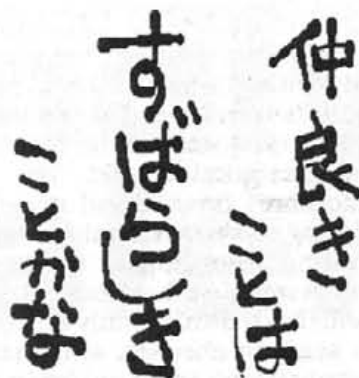
use on your pictures. You can create a new seal design by double-clicking on the Seal icon to open up the Seal Editor. The Seal Editor provides a background grid and the new design can be produced in a similar manner to that used by font editors. The seals may be square or circular and they can be used very creatively.

A small representation of the MacCalligraphy workscreen is shown at the bottom of the tools section, and the area of the screen to be viewed is chosen by dragging the small screen box to the correct position.


The last tool, if it can be called that, is the Tea Break represented by a Tea Bowl icon. The program would not have been

complete without it. Clicking on the Tea Bowl icon transports you to a Japanese room where you may look out upon an imaginary scene of a Japanese garden, the exact setting for contemplation and relaxed enjoyment. Strange to say, the garden seems to change slightly on each visit.

The program does manage to give the feel of Japanese ink painting by providing the right kind of tools, but a great deal of care and sensitivity is needed in the use of the mouse in order to obtain authentic results. I think that the correct feel and action could be achieved in controlling the brush and the ink with some intensive practice, but I must admit that I have not yet achieved it to my satisfaction. I am sure that an artistically gifted person who persevered



and practised over a period of time would end up with a marvellous tool in MacCalligraphy, and I must admit that I love to play with the effects that can be created.

I have hardly touched on some of the more subtle features but have attempted to give a feel for what the program aims to do. The manual is clear and helpful in describing such extra touches as choosing the type of 'paper' that you wish to paint on, getting the right length of tail for your brush stroke, the 'dry brush' option, the 'grey ink underlay' option and many more impressive features. Altogether a unique program. 

#### info

Product : MacCalligraphy™ 2.0

Publisher : Enzan-Hoshigumi

Available from :

Kokusai Software

35 Dover St

Mayfair

London W1X 3RA

Price : £ 89.50 + VAT

Value :

★★★★★

Performance :

★★★★

Documentation :

★★★★★

# What Price Spelling Checkers?

Bill Pearce poses this question

My faith in the usefulness of computers is unbounded. My belief in the superiority of the Macintosh is unshakable. Yet for some months I have found myself devoting more time and energy disputing what appear to me to be misuses of a computer. Try as I will, I can think of only one use for a spelling checker, and that is a use to which as far as I know it has never yet been put. (It is on my list of future projects!).

But to check spelling? Why? There might be some point if it could carry out an **intelligent** check - but it cannot: a computer has no intelligence whatsoever.

What does the checker do? It looks for words that are not in the list. (At least I assume that is what it does - I haven't got one.) To what purpose? There is a good chance that a large percentage of misspellings are in fact words that **do** exist. It is quite easy to type in, either by accident or by design, a word that is incorrect (i.e. does not say what you meant), but which actually exists. The mistakes you would most prefer to avoid, and which would not be picked up by a checker, are such things as *there* instead of *their*, *too/to*, *practise/practice*, *does/*

*dose* and many similar frequently confused words. It is far more embarrassing to misuse a word than it is to misspell it. This kind of error is ultimately detectable only by a human.

The examples quoted might be described as special cases of malapropisms. Some simple souls imagine that it is possible to write an intelligent checker that would detect these misuses. Of course, for any given mistake in any given sentence, you can easily devise a check that would detect it. But **any** mistake in **any** text? First you must identify a possible error. This is the real stumbling block. Every single word is a potential malapropism. Detection of a probable mistake requires a statistical analysis of the context. What is the context? It is not simply the sentence. It includes the entire text, the writer, the intended recipient, the occasion. I leave the reader to figure out how all these factors affect choice of suitable words.

The point is, in the final analysis, even a human checker may be unable to determine the real intention of the writer. So even the best checker in the world must still refer some problems back to the writer. However, let us suppose that our simple checker does just that - refers every unknown word back to the writer. Remember, it has already missed all the mistakes you are most ashamed of. Even as I write this I have just read in a highly prestigious magazine just such a slip that will make the author cringe on realising the mistake.

I have on occasion accompanied a disk file with a request 'Please do not subject my text to a spelling checker'. Not because I think I am infallible. Far from it. My spelling

was more reliable at the age of eight than it is now, although granted I have added a few more English words and thousands of foreign words to my repertoire. No, my reason for the injunction is because on two occasions I have suspected a spelling checker of introducing errors. The first occasion was a document circulated among hundreds of educationists - inspectors, advisers, heads etc.. The word 'rationale' had become 'rational', making nonsense of my sentence. The second occasion was a review I wrote for 'Apple2000', in which I quoted the frequent misspelling 'compatability'. If this article is published, I shall eagerly thumb through to see what happens to these words!

My spelling is not as reliable as it once was: I frequently need to check a word. But I always use a dictionary, for several reasons. I will learn more from the dictionary than from a checker. As often



as not, my query has more to do with usage than with spelling. I suppose my point is that the dictionary is a more versatile tool.

It may be that I am missing the point of spelling checkers. Generally, I either know how to spell a word or I don't, and I know the difference. Can it be that this is not so for everyone? If it is not, then I am barking up the wrong tree.

One day I do plan to use a word list - not as a spelling checker but as a text file, in the following manner:-

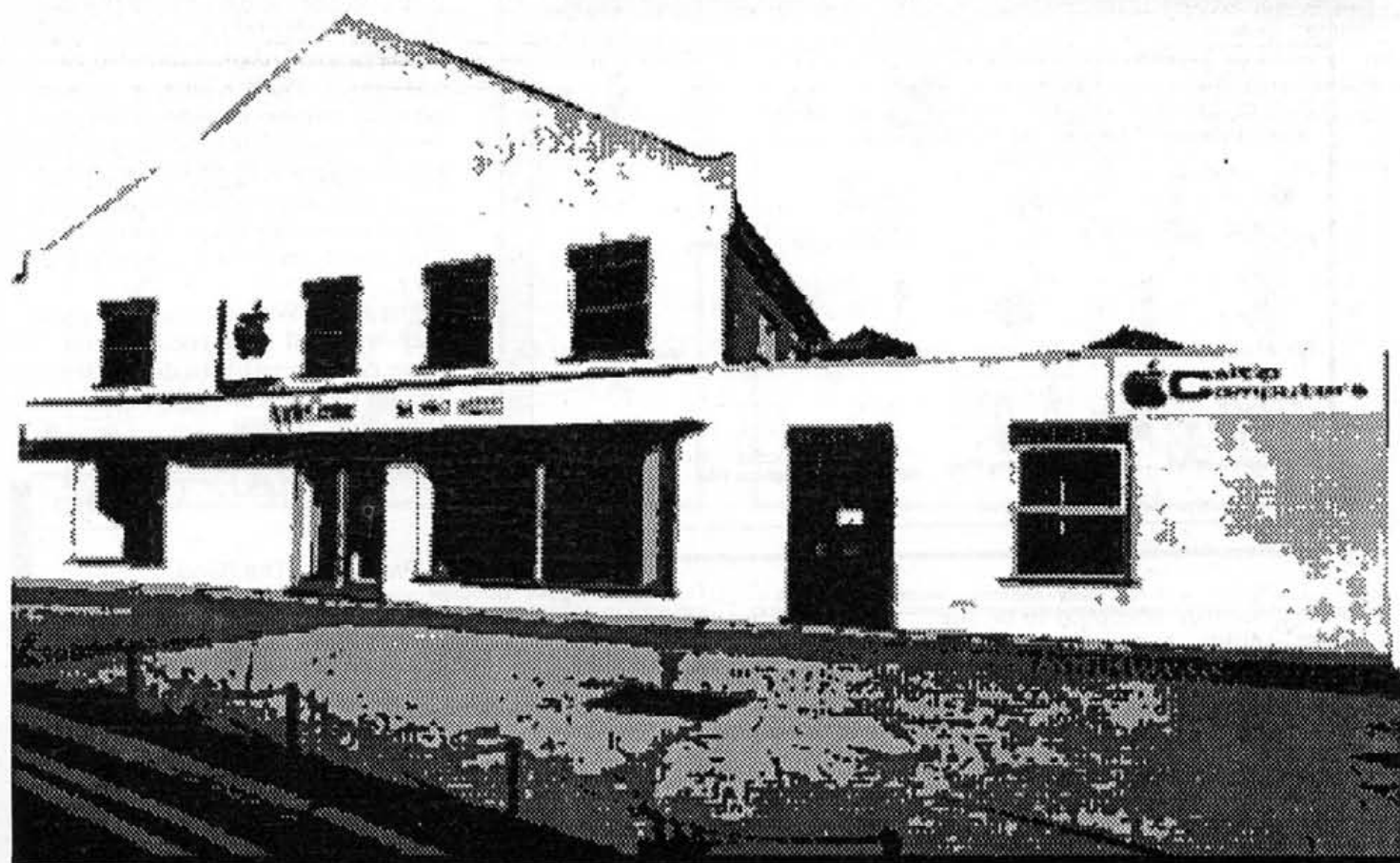
An actual text file would be compared with the check list and restored as pointers: words not in the check list would be stored verbatim. I would expect to effect considerable saving in disk space, particularly as the word list itself need contain only a few thousand of the commonest words. Until then, I do not give checkers disk space.





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# The Blind Watchmaker

Norah Arnold looks at one of her favourite Macintosh applications.

"People sometimes think that natural selection is a purely negative force, capable of weeding out freaks and failures, but not capable of building up complexity, beauty and efficiency of design." So begins Chapter 7 of Richard Dawkins' book *The Blind Watchmaker*, published by Penguin Books at £4.95. This book has been called superbly written, brilliant and controversial, and has

disk is first booted up. The branching tree labelled BW is *The Blind Watchmaker* program itself which can be double-clicked to start off. If the user starts in this way, the standard branching tree biomorph is loaded.

Other files on the desktop are slightly different. Those with the square icons are either albums or fossil records, whereas the rest of the icons depict biomorphs which

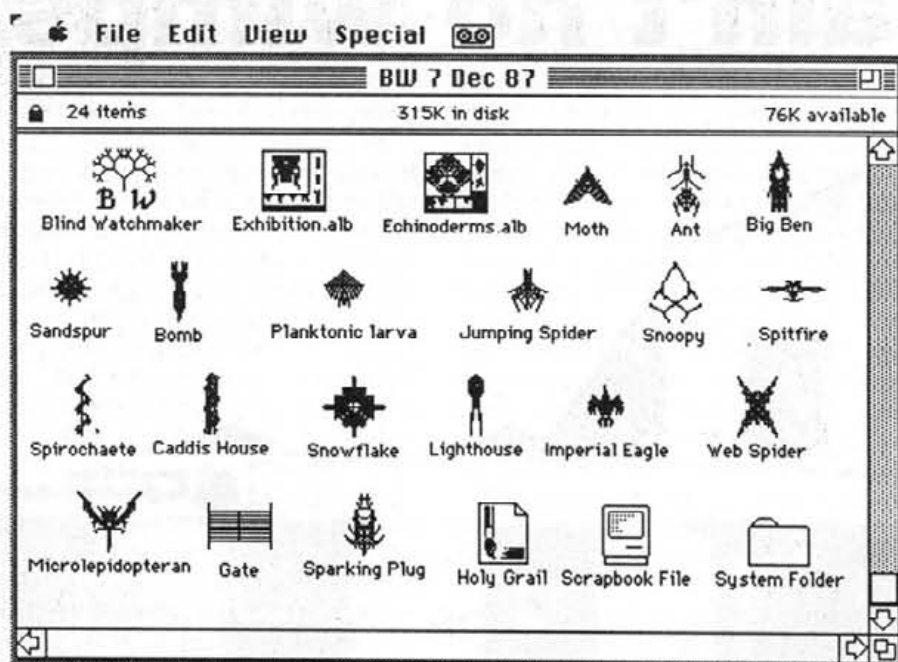
the parent of the next generation, and this will slide to the centre of the screen when it is clicked upon. If this breeding process is carried on for a few generations, one will see each generation changing a little from the previous one until the original shape may be completely changed.

When a biomorph that you have bred is so good that you wish to save it, this can be done by saving the biomorph in a file of its own or by saving it in a collection of biomorphs known as an album. The top four screens on the opposite page show 'pages' from an album of biomorphs that comes with the program.

If you wish to be able to trace the history of a biomorph, then a fossil record can be created and saved. If at any time you wish to see all the ancestors of your biomorph then 'Play Back Fossils' from the Operations menu will put a window on the desktop which will enable you to scan through the Fossil Record.

The Fossil Record only records the parents of each generation but a Pedigree can show the collateral relatives and side branches of the evolution of a biomorph. The lower four screens on the opposite page show the Pedigrees of some biomorphs. The biomorph with the thicker outline to its box is the common ancestor for all those shown on that screen and the lines indicate family history.

*The Blind Watchmaker* is a good buy which I can recommend. I have not been able to do justice to the intricacies of the program in this short review.



been generally accepted to be the most telling exposition of the Darwinian theory of natural selection that has been written in recent years. The Macintosh application, also written by Richard Dawkins, needs at least 512K.

The small manual for *The Blind Watchmaker* program is written under the assumption that the user has read the book of the same name. The illustration above shows what one finds on the desktop when the program

will be loaded if the user double-clicks on that icon. If one chooses the *Jumping Spider* biomorph and starts with that, the screen is filled with fifteen boxes one of which contains the *Jumping Spider* biomorph. Around it in the other boxes are fourteen asexual progeny, some of which may have mutated and changed to some degree. The screen is now ready for breeding to begin.

First the user must select the box of the biomorph which is to be

info

Product : The Blind Watchmaker

Publisher : W W Norton

Available from :

W W Norton & Co Ltd  
37 Great Russell St  
London WC1B 3NU

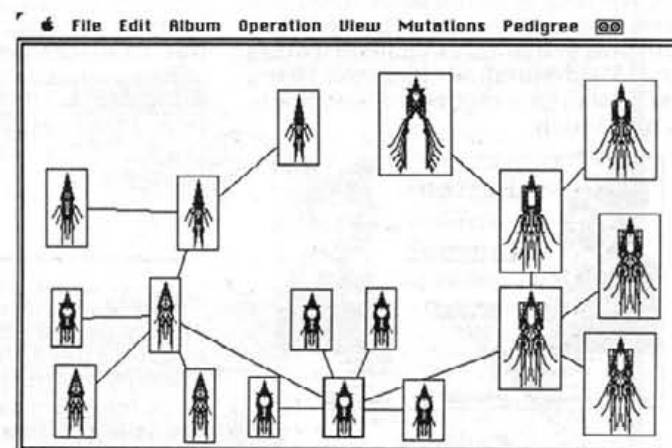
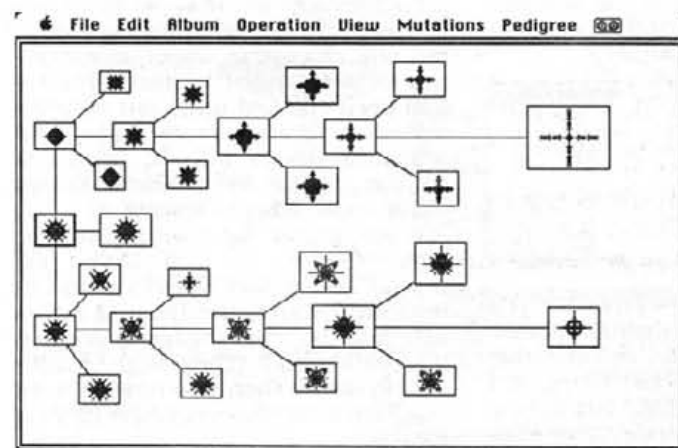
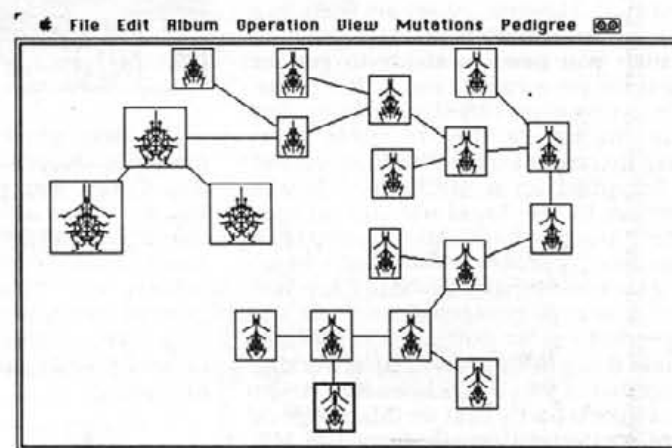
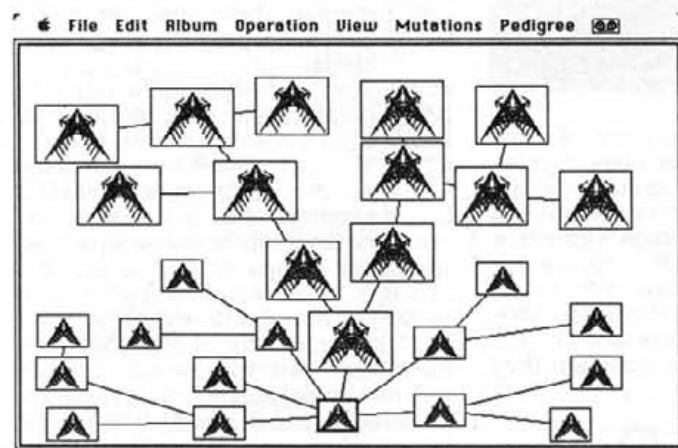
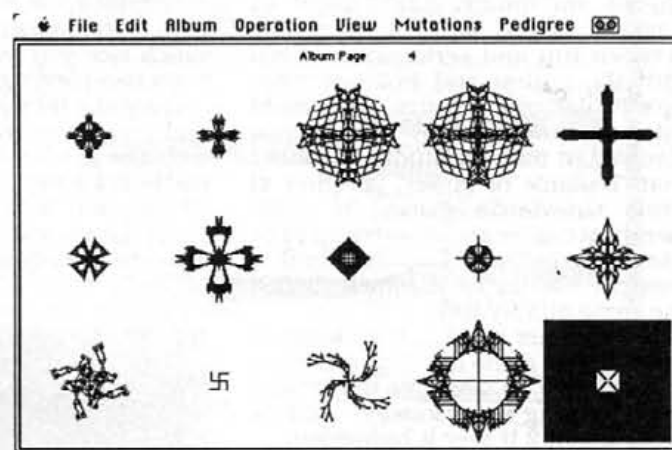
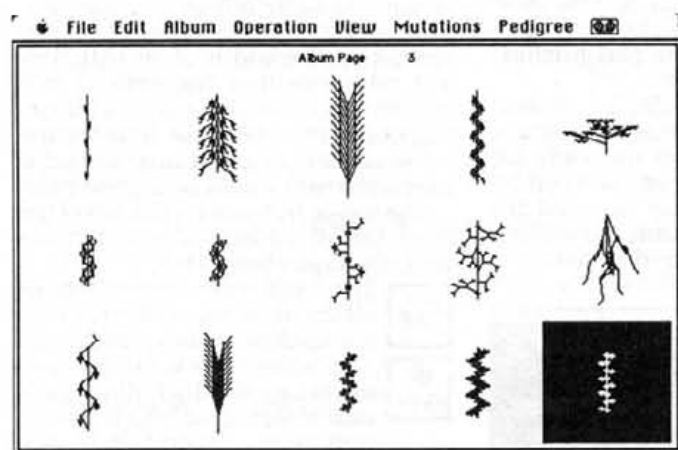
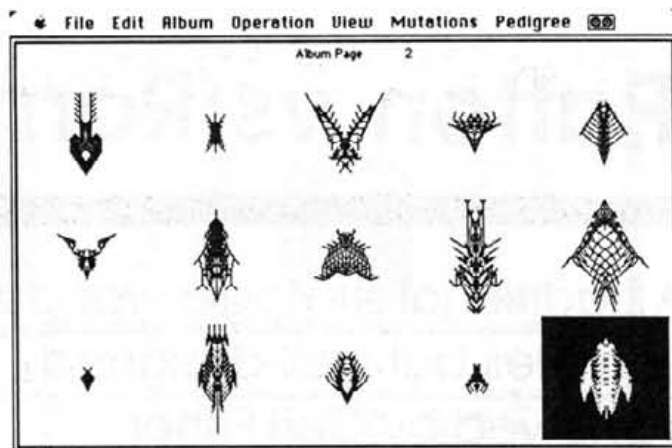
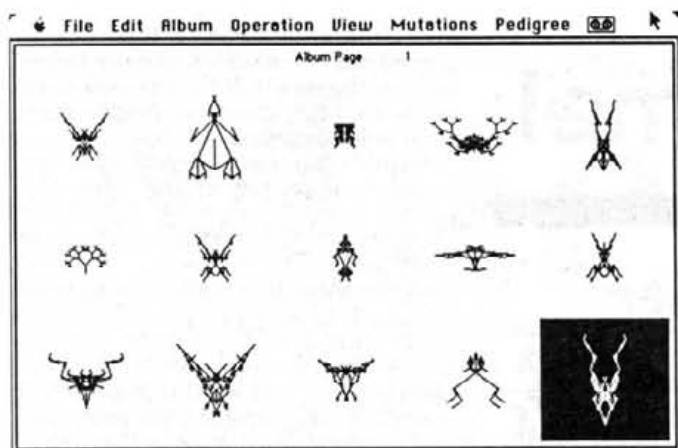
Price : £19.95 + £1.50 p&p

Value : ★★★★★

Performance : ★★★★★

Documentation : ★★★★★





# Patton vs Rommel

A traditional strategic war game,  
complex but well-designed,  
reviewed by Ceri Fisher



There's no doubt that 'Patton vs Rommel' is just on that borderline between fun and seriousness. Even with the Patton and Rommel 'pop-up's' (which you can turn off), I would think it quite suitable for anyone involved in military studies. I gather that 'Balance of Power' (another of Chris Crawford's games) is sufficiently accurate and non-trivial to be used in politics courses, and I thought 'Patton vs Rommel' carried the same quality feel.

On the other hand ... it's enough of a small Mac game (i.e. it reminds me of Mac512's), to make me think twice about buying it personally - but I'd buy version 2 if ever it happened.

The packaging is pretty modest - an LP-style jacket and a thin (10-page) manual. However, it seems there is a lot of information in the manual which you need to study to get the best (or even much) out of the game. Chris Crawford has obviously studied the Normandy theatre quite thoroughly, and it is reflected throughout.

Supplied on a 400K disk, it was written in 1986 and will run on anything from a 512K Mac upwards. It ran fine (apart from not always wanting to cold-start) on my Mac Plus. Tut, tut, it is copy-protected, so it can't be speeded up by putting it on a hard disk; it might therefore fail to work altogether if you put a later System on it. I take it badly that we (Mac owners) are treated differently from the MS-DOS crowd, whose version of the game is not copy-protected.

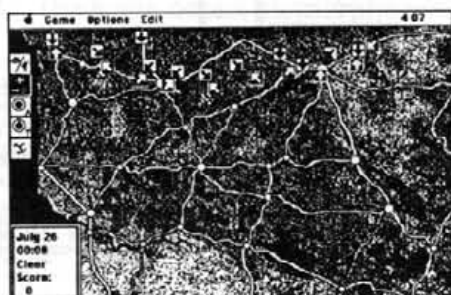
If the disk is in the drive when you boot, the game starts immediately and you get to meet General Patton and Field-Marshal Rommel facing each other in a digitised photograph. A nice touch.



You pick the level of play, which

determines the kind of 'access' you have to the elements of the game, and which side you want to play (including a two-player game).

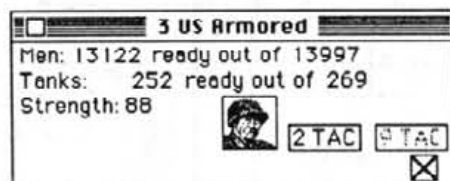
The game then loads (none too fast) and you get to the theatre of action with the armies drawn up ready for battle. It's a pity it doesn't start off by offering you 'New Game' or 'Load old game', because it's double the waiting if you're already involved in one.



The map shows an area of Normandy in July/August 1944. Operation Cobra was just about to start. Roads, towns and rivers are shown; the lightly shaded areas represent 'easy' terrain which favours an attacker, the dark areas are rough ground which helps a defender. Military divisions/units are shown, the arrows pointing in the direction they are facing.



You give your orders by simply pointing and clicking at the unit you want to address. A window appears (the 'Statistics Board'):



This shows the unit's size (the little picture means this is the Allied Commander's unit), the total and available quantities of men and hardware, and its 'strength'. The '2 TAC' box is how you can give this unit air cover from the 2nd Tactical Air Command (point

and click at it). The '9 TAC' box is greyed out because it's already taken (for another unit). If the weather does not permit (i.e. cloudy or worse), then both will be greyed out.

A unit's 'strength' depends on the number of troops in the unit, the actual number ready to fight, and presumably, the quantity and state of their hardware (tanks or artillery). This can vary, in a typical game, from about 10 to at least 60. Every skirmish changes it, usually for the worse. Then you point and click at the places where you want it to go. It will trace out the steps in that path over and over until you do something else. This is handy because you can see exactly where it will go. Unfortunately (since it is quite important that your units don't run into each other) you cannot see the 'width' of the path they will take - neither the path of this specific unit, nor those of neighbouring units. Pity, because that feature (or some sort of assistance in 'traffic management') would be a great help.

The row of buttons on the left of the map control the kind of information a unit displays about itself.



The tank/man button makes all the units show whether they are tank or infantry divisions.

The wheel/shield/arrow button tells you which direction a unit is facing, or which mode a unit is in, depending on the level of play.

The 'A' button tells units to display their available numbers as a proportionally-sized circle.

The 'T' button tells units to display their total numbers as a proportionally-sized circle.

The little crack button makes all the units show a similar symbol - but the size of the crack varies to show the ratio of total troops to troops fit for battle; this changes after any encounter and indicates how battle-weary the unit is. The larger the crack, the more likely the unit will go into 'mobile defense mode' at the first serious engagement - which means it will forget your orders and allow itself to be pushed around (backwards!) by the attacker.

The display will stay on whatever you select, while you give your orders, but will change to wheel/shield/arrow as soon as battle starts. You try and keep cracked units out of heavy action, and push more rested and prepared troops into it, (while, of course, trying to outflank enemy units and hold onto towns).

When you've done with giving orders (one does tire of it ...) you pull down Game, select Next Turn and sit back and watch the next 24 hours action as the units engage each other. It's really good! (They stop towards supper-time). Then up comes a word of advice from whoever you're fighting for.

"Why do you persist in attacks"



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that fail?" (Rommel).

"Because I can't see that they're failing, Sir."

One of the problems is, of course that there is no 'conditional execution' of orders. Maybe this reflects a 'real-world' problem on the battlefield. One can reprogram units near to the commander's, so I suppose one should ensure that the commander is nearest the most sensitive part of the battle to take full advantage of this.

Then it's back to giving orders again. The menu options follow:-

#### Game

This item controls play with:-

**Next Turn:** When you've given all the orders you want to, this triggers the action for a whole day. You can interrupt it and reprogram the units close to your commander's unit.

**Save Game:** Saves the game.

**Load Game:** Load a game. I did have an occasional crash when loading an old game, and it sometimes couldn't see my hard disk.

**Quit Game**

#### Options

**Show Towns:** Probably to avoid cluttering the screen, you have to use this item to show the town names.

**Show Allied ZOC's:** ZOC stands for Zone of Control - the area under a unit's control. If an enemy unit passes through this region, they will have to fight. When you choose this item, the limits of all the allied ZOC's are shown by blinking circles. Rather cryptically, the manual also refers to a unit's 'range' of contact with an enemy, but there is no way of determining to what extent these coincide.

**Show German ZOC's:** Ditto for the German units. It doesn't matter which side you're on.

**Turn Sound off/on:** Turn it off. It's irritating in quality and detracts from the game.

**Turn Animation off/on:** Animation shows you (sort-of) the blow-by-blow events. If it's on, then the effect of every encounter on the 'crack'ed ratio symbol is shown momentarily. If you turn it off the game certainly proceeds a lot faster, but it can help to see which units are being worst affected.

**Turn Advice off/on:** Do you want Rommel or Patton giving you a little 'friendly advice' (or a jolly good dressing-down!) after every move? I appreciated it. It was usually directed at the worst part of my organisation and, although sometimes a bit obvious, often it alerted me to things I hadn't noticed (or couldn't explain).

Patton had a fairly laid back style (unless things were going very badly):



Rommel was very Teutonic, very correct (unless he got really mad!):



Here are some other examples:-

*Good traffic management is vital to an operation's success. (Rommel).*

This means two of your units couldn't get round each other.

*I wouldn't promote you to traffic cop! (Patton).*

Obviously this is a bad mistake to make whichever side you're on.

*Your main line of resistance is somewhat ragged. (Rommel).*

I failed to fall back in a clean straight line. (Rommel likes a line 'straight, disciplined and well-manned'. Jawohl!)

These quotes show why the advice feature is good.

#### Edit

This is only available if you're playing in Expert Mode, but then you can really re-write history. I tried it once but didn't have the time to play it out to the end.

**German Units:** Gives you Rommel's cap - even in the middle of a game. Now you can interfere with his units, their orders, etc, as well as see all those units you've lost contact with.

**Allied Units:** Gives you Patton's hard hat.

**All Units:** Try wearing them both at once!

**Game:** Allows you to change the game parameters:-

**Last turn of game:** Date for the end of the game. A later date favours Patton.

**Intervention Radius:** How close to your commander's unit another has to be for you to affect its orders.

And finally, you can alter the numbers of American, British and German reinforcements which turn up from time-to-time during a game.

**Combat:** Here the actual combat parameters can be changed:-

#### ZOC radius

**Flank attack advantage:** how much easier it is for any non-frontal attack

**Combat bloodiness:** the casualties occurring during a combat loss

**Airpower strength:** the advantage when covered by air (Allies only)

The next items allow you to change the following characteristics of each mode for units in intermediate and advanced games:-

Movement speed      Attack power

Defense power      Breaking point

Casualty vulnerability      Road Mode

Mobile Defense      Mobile Attack

Standard Attack      Static Attack

Standard Defense      Static Defense

**Unit:** This allows you to do anything at all to a unit - e.g. rename it, change its size, arrival date, etc. Wunderbar!

**Raise the Dead:** This command immediately re-replaces all units which have already gone out of action or not yet arrived.

In conclusion, I commend 'Patton vs Rommel' to anyone with a real interest in either the history of the Normandy phase of the second war, or, more likely, a general interest in military strategy and planning.


Here's one example of an interesting kind of problem which became clear to me through playing 'Patton vs Rommel':

One of your units is engaged with one (or more) enemy units, and you decide to withdraw it to save strength for later. You get your unit into a defensive mode, back off and - the enemy units disappear. You didn't beat them (by withdrawing), but since the map can't possibly say with any certainty where they are, it doesn't mark them at all! Next time you (as general) see those enemy units, they could well be ten or more miles away, making contact where you least expected them. Ho-hum. A serious problem well illustrated and, in a way, experienced by playing this 'game'. You can also lose contact with your own units ....

If it were possible, it would be good to see a second major release of this game to run on megabyte Mac's. What would be in such a hyper-game?

One would certainly want different levels of detail (similar to the two levels of 'the Ancient Art of War'), so one could zoom in and see what is really happening. It might be a lot to ask to see right down to individual vehicles or squads, but more detail - including different order-giving for a 'tactical' level - would make this game worth twice the price.

One level might be a 'higher' one - a good time to show the occupied towns and areas, summarise events so far, and present 'fronts' showing discontinuities in the line of ZOC's especially.

However, until then, this game makes a very interesting and authentic simulation just as it is. 

#### info

**Product:** Patton vs Rommel

**Publisher:** Electronic Arts


**Available from:**

MacLine

(Please see page 53)

**Price:** £29.00 + P&P + VAT

**Value:** 

**Performance:** 

**Documentation:** 



# RR Host 2.0

For Comms addicts: new features of RR Host 2.0 by Scott Watson.

## New Features of RedRyder Host 2.0

Originally downloaded from THE DINER BBS ((512) 836-1420) in the USA by Werner Uhrig then uploaded to Infomac.

### Files : 1K - Block Xmodem.

File listings maintain: Date of last access; Number of times the file is accessed.

There are new menu commands that work in conjunction with File transfers: New since last call with Download; Search for File with Download; List Files from New to Old with Download; List files from Old to new with Download

These commands append a Download command to the command line to the File list as you list files.

There are now 10 lines of description available for every file uploaded or posted in the file sections to more adequately describe uploads.

### Message Base

Host 2.0 Message bases now support Threading. You can follow a string of messages from beginning to end, including sub-threads that are threads of messages that are replies to replies. You can Show the original message of the thread you are in at any time its applicable to a threaded message.

The New Message bases now support variable length messages set by MsgEdit from 1-400 lines per section.

There are 4 new menu commands for searching by subject: Read with search by section; Scan with Search by section; Read with search all combined sections; Scan with search all combined sections. The Security level set for the Combined Read now sets the access level required by the user to post a new message to that section. This means that even replies cannot be sent if you make it so the new user can read messages, but the access level for the section is higher than the users level.

The command line of the Message base, now supports a (CR) as next, and requires an explicit command "Q" hot key to exiting reading messages. (Note: The file sections also work the same way when listing files.)

The Userlog now remembers the highest message read, so you can on subsequent logins read messages that you have not read yet, as well as new messages since the last call.

Cancelling a message now asks you if you wish to abort message entry or only what you've entered so far and starts the message over at line 1.

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You are prompted for a new subject for every message, so that the message header will be able to reflect the message contents if you wish. Entering a (CR) will leave the Subject as it was. Entering a Control-X will clear the subject line for a new subject. The Message header now displays when a message has been received by the recipient.

### Menus

The Menus now support 24 restriction flags for each menu item. These items can be set to "match" or "not to match" the users restriction flags set by the default settings in the config file for each user as they login. Also any combination of flags can be set giving virtually thousands of combinations of access in combination with the 255 levels of security access. The Userlog supports the restriction flags set for each user and can be edited and maintained with UserEdit. As well as Survey commands and online Sysop editing commands.

### System

You can now choose to set in the config file the following new items for your system:

You can support an upload time credit, this adds the time used to upload a file to the users time limit for that call only. For example if a user has a 30 minute time limit, and uploads a file that takes 20 minutes, he will have 20 additional minutes that call.

You can support a Chat time Credit, if you break in and chat with a user, or respond to a page, the user is credited for the time in the chat mode with you. Time enforcement: You can now set the amount of time a user can call your system back should his time limit expire during the enforcement period.

For Example, you set your system for a 12 hour time enforcement. John Doe calls at 9AM, he is allotted 30 minutes, he uses the entire 30 minutes that call, he will not be able to login again until 12 hours has expired, or 9PM. If he calls at any time during the time enforcement period, say 3PM, he will be logged off, and will not be able to call for 12 hours from 3PM now... or 3AM.

If John Doe had only used 15 minutes the first call at 9AM, and made a subsequent call at 3PM, he would have his time on the system reduced to 15 minutes, and if his time limit expired, he would not be able to login again until 3:15AM.

You can now support 19,200, 9600, 2400, 1200, 300 baud, with 300 baud lockout if you do not wish to support 300 baud users.

A Network Mail application can be configured for a timed launch in the config file. You set the time in hours, minutes and seconds in the config file and the path to the Netmail application, and Host will reduce any callers time limit accordingly if he calls too close to launch time and will log them off and then initiate the application pathed in the config file. You can now Disable the local Echo, this closes the terminal window for Host, which is a standard movable window. With the terminal Window closed, throughput to the user is much greater and will be faster than 1.4. Downloads are not affected by this.

Host can now keep track of the total number of calls your system receives if you keep a file called Cumulative calls in the same folder with Host.

Host now supports Desk accessories; Status bar now

reports the time and date of the last caller online. You can only click in the status bar to cancel a file transfer instead of anywhere as before. There is a 3 minute warning to let you know that time is about to expire. There is now a Newuser.msg and a Logoff.msg that are displayed accordingly, the newuser.msg will only display for a new user on his first call. The logoff.msg displays whenever a command 1 logoff command is executed. They are placed in the same folder as Host.

### MultiFinder compatibility & MultiLine:

It is now possible to configure Host to share specific files and run independent BBS's, one thru the modem port and the other thru the Printer port under MultiFinder. They share the following files; Message files, Userlog, menus & files by the proper pathing in the config file. Each System will still require its own config file and main menu, Modem files and welcome files to run.

### Surveys


There are additional Survey commands that enhance the current survey commands that are in 1.4 as well as Survey commands that support voting. They are: New command 0 (zero) converts last input to upper case. New command 19, place ascii character specified in "Text" to the scratch file. New Command 20, clears the scratch file and branches to a label. This is useful for surveys that display a fair amount of text before asking for input and allows the user a second chance to input should he make a mistake, without having to start the survey over.

New command 21, If users download to upload ratio is less than the number in "Text", go to "branch". 4 new Survey commands to set or unset restriction flags either permanently or temporarily for that user which can affect the Menu displays for the user.

4 New Survey commands to initiate the text file read commands that Host supports: cancellable, no prompts; cancellable, all prompts; not cancellable, all prompts; not cancellable, Final prompt only.

These commands are useful for validation Surveys where you can present validation information to the user and then get his input. They can also be used to display the "Survey Scratch" file so that the user can check his input. 13 new Voting survey commands that can ask the user for specific input, yes or no, or multiple choice, and then display the results of the voting so far in percentages as well as the number of people voting yes or no, or a.b. or c. depending on how you set up the voting survey. There are also commands to prevent the user from voting more than once. Surveys are now time and date stamped in the RES file. Survey interpreter has been sped up to make branches execute faster.

Sysop commands that have been enhanced are the user updating commands for time and access level have been modified to set or unset restriction flags. The Maintenance command for the file sections will now physically delete a file if told to do so. As well as delete or move the listing to another specified file section.

While not every feature you could have asked for, or has been asked for is here. I think that Host 2.0 adds enough features to keep things lively on your systems for quite a while. 



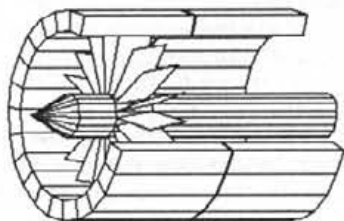
# Super 3D

## A 3D graphics editor and modelling program reviewed by John Arnold.

### General description

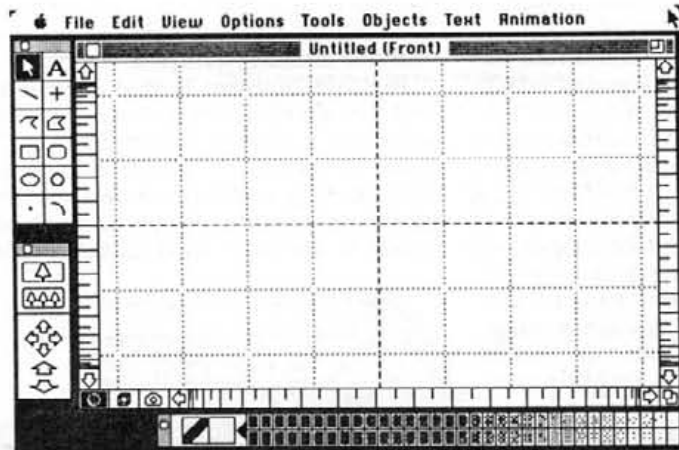
Super 3D is a three-dimensional modelling program which also contains an animation section. Models can be created within the program and edited, or the models can be created with other packages and imported into Super 3D. They could for example be generated with a Pascal program, a C program or produced using a spreadsheet such as Microsoft Excel.

Having produced a model by one means or another, the model can then be displayed in a variety of ways. These include a wireframe display, a hidden-surface display, a shaded model (using up to four light sources), an advanced solid modelling option, perspective can be applied to the model, four views can be displayed on the same screen. Also the model can be viewed from multiple user-adjustable cameras at the same time, the



camera position, angle and zoom ratio can all be easily changed. Models can be constructed using the principle of hierarchical model construction, and shape libraries can be used, with it being possible to merge documents, so that models already built can be used in the construction of new models. The models produced can be clipped and pasted into a range of other applications, also the capability of being able to save a view as a PICT document means that your view can be read by MacDraw and SuperPaint etc. Finally it is possible to use as the background for your display, a MacPaint document.

The above is a fairly comprehensive list of the features offered by Super 3D, and as can be seen, should meet most of the expectations one would have of such a program.



### Details of configuration.

Super 3D is packaged with a 170 page manual, a non startup 800k disk, and a 800k disk of sample files. There are some addendum sheets with the manual giving additional information, and further explanations of some of the features which it was felt, needed some expansion over that given in the manual. The application can be copied to a hard disk, or to a floppy to give a working environment. Super 3D must have System 4.1 and Finder 5.5 versions or later, otherwise it will not start up. It is compatible with MultiFinder requiring 406K with the Plus and 684K with 256 colour Mac II with in the latter case, an additional 800K required for the animation option. I found using a Mac Plus that I couldn't in fact run it under MultiFinder with MacWrite running (the dialog box told me I required 735K to run Super 3D which is in disagreement with the information given).

### Using Super 3D.

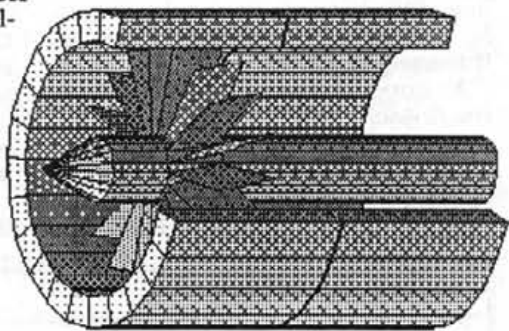
On booting up and selecting New from the File menu, a screen like the one above is obtained. As can be seen from the screen dump there are non-standard scroll bars, these are called spin wheels. The spin wheel on the left side does not normally appear, unless that particular preference has been selected. The preference dialog

box is obtainable under the Options menu and this allows you to choose short or long menus, set controls and the nature of the startup window and your selections are saved as a preference file from which you can start Super 3D.

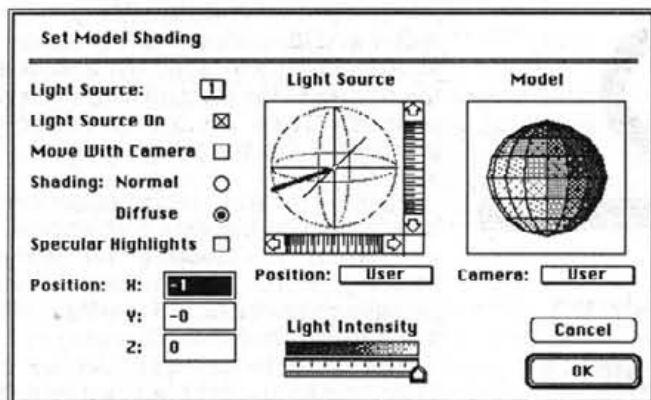
Opening the sample file Simple Turbine gives you the wire frame shown in column 1. Choosing Set Model Shading from the Options menu brings up the dialog box shown at the top overleaf, and this allows the individual lights to be turned on (up to four), and for the light positions etc. to be fixed. Closing the dialog box starts

the updating process, giving the model shaded according to the mode set by the Display as Solid options (Faster, Better, Best). Below is shown the model with the quickest shading mode chosen. In fact the rendering algorithm known as the depth sort, is used for the Faster rendering mode, the

Painter's algorithm for the Better mode and z-buffering for the Best mode. The Simple Turbine is shown with the Best rendering mode on overleaf. The manual contains a section giving example of basic techniques, this being done by following through the creation of a number of objects. I thought that some of the examples in this section could have been made to appear more realistic, there is for example a fairly awful sailplane. Another example given is the Terminal building at Dulles International Airport, the instructions reading as though the user has in front of them, a complete



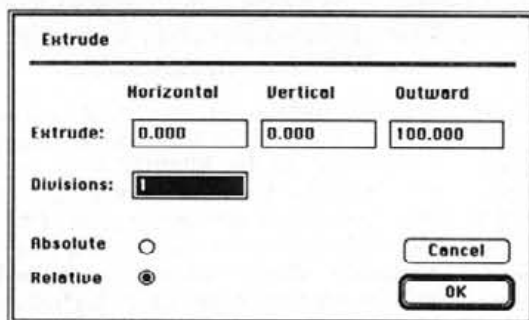
scaled drawing of the building, and as this does not come with the package, I found it to be slightly irritating. However that said, the finished building does look quite impressive. I felt that this section of the manual could certainly stand having better examples for a new user to follow through. Creating a drawing with this



package needs a certain amount of dedication on the part of the user, as is so with most similar packages.

Super 3D makes a substantial use of dialog boxes for the input of certain information. A range of tools is provided as can be seen from the screen dump on the previous page, but to actually build up a three-dimensional structure is not usually a trivial task and I found it indeed to be a laborious process. No doubt the more you use the program the easier and quicker it would become. There are a number of features under the Tools menu for assisting in creating particular shapes. Extrude for example allows a selected plane shape to be extended through a number of sections, by the distances specified, by means of the Extrude dialog box, see below. There is a similar 'tool' for Revolving a plane shape, to produce a 'solid of revolution'. The Macintosh window contains the drawing window with the scroll wheels, the tool window, the Grayscale window, and the Camera Control window. There are two further windows which can be put onto the screen, they are the Coordinates window, for displaying the mouse coordinates with additional information being visible when using the drawing tools, the other window is the Display List window which enables the display list to be edited, each line of the list with its mnemonic can be displayed, the elements can be traversed similarly.

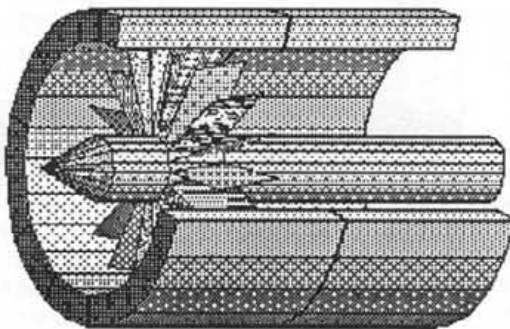
An important part of the program is the Animation option, this allows for the automatic recording on disk of the image as it is rotated, and translated by amounts which are specified in the Spin/Translate dialog box. The saved



file can then be played back, again there is a dialog box for changing the number of frames per second (60, 30, 20, 15, 12, 10, or 5) or for entering your own delay between

frames. The process produces a large file for even a trivial number of objects, and there may well be a problem if you are not using a hard disk, should you want to animate complex objects.

Another problem is that of speed, not the speed of animation, but the generation of the data for the animation. The sequence of screen generations as the program goes through the initial process can be very slow, so be warned! The manual gives details for



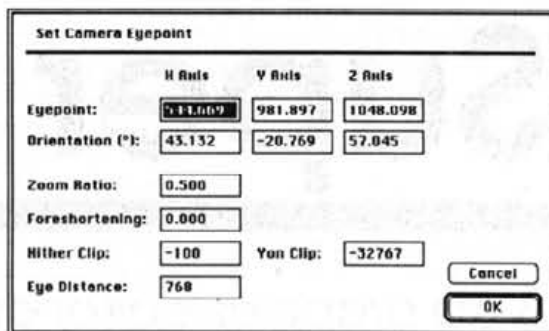
writing your own Pascal program for producing an animation file. I did use MacPascal to produce a text file containing the data for a three-dimensional surface, (again, as given in the manual) which I imported into Super 3D, and rendered, the file was large, and took some time to load in, but this way of generating data appeals to me, and I was pleased to get an image I could play about with.

#### Conclusions.

Having first of all looked at some of the samples I was not too impressed, Silicon Beach could have done themselves more good by including a better selection of examples.

I found using the Macintosh Plus, the generation of some of the examples frustratingly slow, I seemed to spend about 80% of the time waiting for the screen to refresh. It is advisable to display the wireframe model when rotating, and even to turn the auto-refresh off.

The scroll wheels are not too controllable using the normal scroll arrows, however clicking and dragging on the wheel itself does enable the number indicators that then appear on the



wheel to be controlled easily, the angles showing are relative, so that each time a scroll wheel is used, the initial angle shown is zero. I found this to be inconvenient on occasions, no doubt I have missed the method of making this an absolute angle.

Some of the rendering didn't look too impressive on the small Macintosh screen, and for serious work a large screen would be a must! The Apple animation shown at the SIGGRAPH 88 show at Atlanta, was created with Super 3D, and a number of other graphics programs, on the Mac II (in fact 25 Mac II's connected via EtherTalk, working away for eight days to produce the images used in the video).

As I used the program, I found that I liked it the more I used it, although the slow speed is still annoying. If you want colour, and for the Maths coprocessor in the Mac II to be used, you will have to pay even more money for the pleasure of saving time, as the program which supports those features is the Super 3D Enhanced.




There are many more aspects to the program than mentioned here, and it provides many facilities for the creation and rendering of three-dimensional images, all that is required is money, and some considerable patience as the model is constructed and rendered.

info

Product : Super 3D  
Publisher : Silicon Beach  
Available from :

The MacSerious Co.  
17 Park Circus Place  
Glasgow G3 6AH

Price : £195 + VAT  
Enhanced £375 + VAT


Value :   
Performance :   
Documentation : 



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Stack: Accounts Receivable Sorted by Month of Invoice Date, Last Name, and Invoice #

CLIST #	INVOICE DATE	INV #	CUSTOMERS NAME	PHONE #	TOTAL INVOICE	BALANCE DUE	PAGE
1001	03/04/87	4105	Esperman, Hugh	317-881-1234	\$ 212.50	\$ 162.50	145
1001	04/12/87	4106	Esperman, Hugh	317-881-1234	\$ 185.00	\$ 185.00	189
1001	04/25/87	4107	Esperman, Hugh	317-881-1234	\$ 212.50	\$ 212.50	93
1000	04/14/87	4113	Mullins, Scott	317-243-4476	\$ 406.00	\$ 406.00	184
Total For Month 04					\$ 992.50	\$ 992.50	
Average For Month 04					\$ 267.50	\$ 267.50	181
1122	05/02/87	2223	Brown, David	317-881-7511	\$ 157.50	\$ 157.50	88
1001	05/20/87	4108	Esperman, Hugh	317-881-1234	\$ 267.50	\$ 267.50	96
					\$ 450.00	\$ 450.00	76
					\$ 150.00	\$ 150.00	82
					\$ 840.00	\$ 840.00	75
					\$ 240.00	\$ 240.00	61
					\$ 300.00	\$ 300.00	54
					\$ 90.00	\$ 90.00	67
					\$ 2540.00	\$ 2540.00	
					\$ 322.50	\$ 322.50	72
					\$ 88.00	\$ 88.00	84
					\$ 419.50	\$ 419.50	35
					\$ 340.00	\$ 340.00	54
					\$ 267.50	\$ 267.50	94
					\$ 225.00	\$ 225.00	42
					\$ 212.50	\$ 212.50	56
					\$ 212.50	\$ 212.50	56
					\$ 612.50	\$ 612.50	86
					\$ 185.00	\$ 185.00	24
					\$ 395.00	\$ 395.00	27
					\$ 162.50	\$ 162.50	33

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# PT - 109

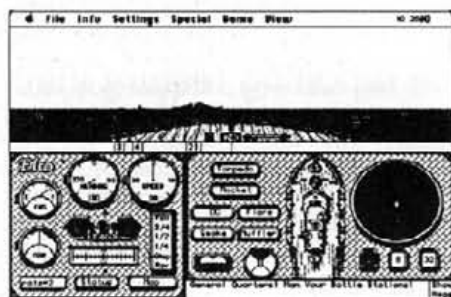
Ceri Fisher reviews this game from  
Spectrum Holobyte



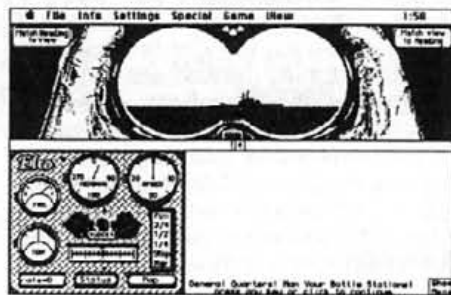
PT-109

"Welcome on board ship, Commander Daniel. Real good to have you with us! As you can see, there's a heavy sea running, and we're just about to engage the enemy convoy."

A klaxon sounds. "General Quarters! Man your battle stations!" shouts a voice.



"You can see some of their ships from the bridge and you get a pretty good all-round view from here, too. There's binoculars for you if you need them, sir."



"Let me show you around, Commander, since we're not actually under fire. This is a wooden-hulled 70-foot 'Elco' PT boat, with three 1500 hp engines which give us 35 knots. We carry 3000 gallons of gasoline for a range of 500 miles. I let the crew of 17 handle the guns, (50-cal machine guns, 20mm and 40mm cannon) - I just point at the target number on this here 'target rail' above the controls - so that I can steer the boat into trouble and fire off the 45-knot torpedoes, of which we have just four, plus a dozen rockets and four depth charges. All this stuff is controlled from the bridge, and I could handle the guns myself if I really wanted to."

"We've got variable range radar and sonar, and smoke and mufflers, so you might say we have pretty good eyes and ears as well as being able to hide from theirs. All in all we can deal with a collection of targets like this in about 10 minutes, and we can speed things up with that 'Rate' button in the left corner if we feel like it."

We notice the convoy ships spread out and larger now as we move in amongst them.

"We're getting in close now, Sir, moving at full throttle and steering by either rudder or compass - we line ourselves up on the radar screen, or just drag to the direction we want to go, and that bearing is the one we steer by. So we can pick the nearest target off of the radar and make straight for it."

Then the guns start to pound as we get in range, and gun-flashes on the nearest ships are followed by shells landing in the water very close to us... Rockets whistle off into the sky, we launch a torpedo which arcs into the water. We turn quickly, (so quickly, Commander Daniel loses his balance as the sea dips), launch another torpedo and turn again past a cruiser which looms suddenly high above us.

"Torpedo One hit!", shouts a crewman.

A flash and nearby explosion shake the boat. "Torpedo Two hit!", shouts a crewman. Smoke and debris rise up into the sky from the stricken cruiser.

The radar blip for the convoy's submarine changes to an 'icon'.

"That means it's dived, Commander. Now let's see if we can't give those fellers a little earache down there."

We change course continuously now, to keep the submarine's target indicator dead ahead as we come over the top of it. Just as it seems to move rapidly off to one side: one, two, three, four depth charges hit the sea with a mighty splash. A few seconds later, a strange, deep, reverberating explosion and huge column of water fill the air, then another, then two more. The target indicator is crossed-out now.

"We got him, Commander! Get some aspirin, ol' buddy!"

"Sank that submarine. Skipper", comes the message.

But just then, a loud crash and dark smoke.

"Gun's been hit, Skipper!", shouts a crewman.

"The starboard .50 cal has been slightly damaged, Skipper", reads the bridge message.

Another flash and explosion shake the boat.

"Damage below deck!", shouts another. "We must stop to fix our damage below deck!"

"The number 3 engine has been slightly damaged, Skipper. Repairs should take about 19 minutes, Skipper", the bridge message confirms.

"Shutting down engines to effect repairs", it continues.

"Well, how about that, Commander. These guys below decks just don't realise there's a war on, do they? Here we are in the middle of an enemy convoy, everybody shooting at us, and what do they do? Shut down engines! I think we'd better just wind these engines back up again. Now what is it - we don't seem to be able to change our course at all!"

"Damage below deck!", shouts another crewman. "We must stop to fix our damage below deck!"

"The rudder has been slightly damaged, Skipper. Repairs should take about 21 minutes, Skipper."

"We need to stop to fix our below decks damage, Skipper."

"I know that, you hound dog, but can't you see they're trying to sink this little boat, and you're in it?"

The vast bulk of the cruiser slips beneath the sea to one side of us, leaving momentarily, a spill of wreckage on the surface.

"Sank that cruiser, Skipper."

"That cruiser was the largest vessel in this convoy, Commander, so we're well clear of trouble now. Of course, the destroyer is fast enough to give us trouble now we're running on only two engines, but in reality..."

PT109 shudders again as another enemy ship finally gets our range.

"Damage below deck!", shouts another. "We must stop to fix our damage below deck!"

"The number 2 engine has been slightly damaged, Skipper. Repairs should take about 8 minutes, skipper."

"Shutting down engines to effect repairs, Skipper."

"We could abandon ship, Skipper", interrupts a crewman.

Although all appears calm on the bridge, the shouts of the crew are



more frequent now, as enemy gunfire buffets PT109 mercilessly.

"The number 1 engine has been slightly damaged, Skipper. Repairs should take about 5 minutes, Skipper."

"We should abandon ship, Skipper."

The air thickens with dense smoke which completely obscures the convoy and the bridge. When it clears, PT109's stern is below water, the crew clinging to planks or just shouting at us.



We see Commander Daniel's water wings bobbing colourfully about 10 yards away.

"Aw, shucks! I never shown you the radio room, Sir."



"We could've radioed for help for you. Now you're just going to have to swim with the rest of us."



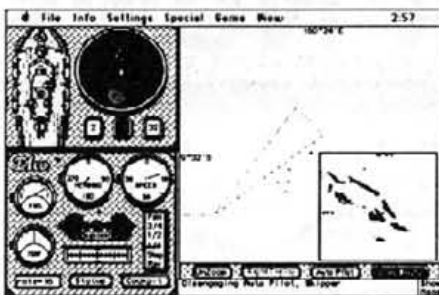
The flag fell listlessly to half-mast, and as the band played mournfully, the Marines saluted the loss of more brave Americans.

#### Odd Notes

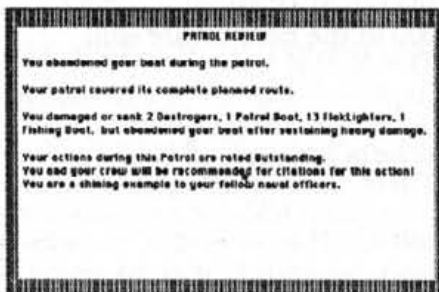
Well, now we've got cleaned up after that little boat trip, what did we omit to tell you?

The main thing would be the below decks 'action' in the game - based not on picking off a similar set of targets each time you play, but actually navigating (or using autopilot!) round an

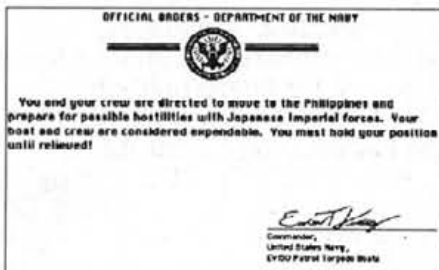
authentic patrol route which is marked on a two-scale (Zoom and UnZoom) map of the area. It also



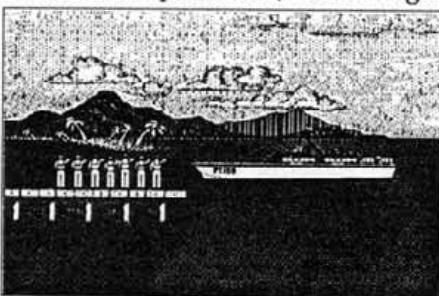
shows the positions of enemy boats (and, because they leave trails, their speed and direction - very handy for planning your most lethal approach). Each patrol is then 'judged' on how well you performed overall, not just in one engagement.



You may have to drop off and/or pick up a commando team or something and you're certainly expected to have a number of encounters (by day or night...), as we have already experienced. So you really need to make every shot count...



This is what takes the game out of the arcade league, and puts it in the 'You'll stay up all night with this one' category. Then the fun on a number of patrols is itself collected up into even larger 'campaigns' - which you need to survive each patrol of, (or at least get



picked up if you sink) in order to complete.

The campaigns and patrols are totally realistic, being based on actual theatres of action with which this kind of boat was involved in the second world war in the Pacific and Mediterranean. The maps are right there, as is the air action (support or enemy activity) and the kinds of targets you run up against. (Don't worry, you're not on your own - the package includes a really good 'training manual', which tries to prepare you to deal with Japanese Zeroes, destroyers, mines, and anything else which might be Out There. "Of course, gentlemen, the war and the boats are kind of new."

#### Now for the not-so-good features...

There's no dialog on startup (new game, load game, etc.), so you must remember to select an old game from the desk top instead. This means that, if you really enjoy level 4 practice sessions - or you want to practice them a lot - you have to start the game (1min 15sec wait - and this isn't a disk-bound operation either), and then start a level 4 session (another 20sec wait). Commander Daniel just couldn't see why all this waiting was necessary!

In fact, all my gripes about this game are in the performance area. I mean, you can run this game under Multifinder (hide it behind Excel... actually, strange noises would give it away), put it on your hard disk, get screen dumps, ANYTHING. But just when the going gets interesting, (you're two yards from the hull of a cruiser, trying to avoid a mine, you may just have lost the second engine and your rudder...), it crawls - or so my adrenalised brain thought it did!

Never mind. Get it anyway, and get one for the kids too, (a Mac, I meant).

"At ease, men."

info

Product: PT109

Publisher: Spectrum Holobyte

Available from:

MacSerious Company  
through your local  
Apple dealer

Price: £49.95+VAT

Value: ★★★★★

Performance: ★★★★★

Documentation: ★★★★★

# Network News

The latest news, tips and gossip  
from the networks.

## From Usenet

**From:**Kevin Thomas Looney  
**Subject:**MIDILisp for the Mac??

I recently completed a thesis involving computers and music. I spent some time tracking down MIDI tools for it. I do not have a copy of MIDI LISP. I also know that it was not available for public consumption last fall. Stanford U. was using it however at CCRMA for some programming classes they were teaching. I talked to Chris Chaffe over there some time ago, who gave me the name of the developer in Paris who made MIDI-LISP (From what I understand, It is a super-set of Le Lisp), the name escapes me presently.

Stanford had a Beta-version, and were reluctant to let anything go without permission from the developer.

Some other options to consider: I purchased MIDI Pascal from Altech, and I also have Austin Developments MIDI-Drivers. Both have .REL files and may be linked to code that is linker compatible with that format (I believe Allegro will be soon providing 'Foreign Function' call capability to their Common LISP, providing a way to link in .REL files). I personally have been working on linking these routines to a proprietary rule-based system here at the University of Oregon called ORBS.. It is a Scheme (lexically scoped LISP) interpreter with Object-Oriented programming, and it has the capacity to create multiple Rule-based interpreters. The Mac ported version of ORBS is written in Lightspeed C, thus it has the capacity to link .REL files. In terms of my experience with the Altech and Austin Drivers, The Altech ones provide fairly good documentation and I have had no

problem with them so far.

The Austin Drivers have little to no documentation (except inline source doc) and no examples of usage. They do however Time-Stamp the incoming MIDI info (Altech MIDIPascal 2.0 does not, 3.0 in the near future will).

The Austin Drivers are free (address was written in a newsletter about a month ago) and the Altech drivers are under \$100.

There is at least one alternate language I know of available with MIDI. This is LOGO. I believe Northwestern U may be using it (I'm not sure, but I think Allegro may have developed it).

Does anybody else know about other programming languages that speak MIDI?

Kevin

**From:**Carter Scholz  
**Subject:**MIDILisp for the Mac??

Yes, I wrote an article on music programming languages, which will be appearing in an upcoming issue of Keyboard magazine Real Soon Now, Maybe. (I've been paid, so I know they'll print it.)

I was unable to find a copy of Midilisp, though I e-mailed IRCAM about it. Someone I know had a working copy a year or two ago, but it required the almighty-expensive LeLisp (\$700+) to run. Jim Miller's IBM program Personal Composer includes a LISP dialect which is, predictably enough, unusably slow on a stock IBM-PC.

I wish I'd known about ORBS when I was writing the article. Anyone with more intelligence about programming languages, let us know here! This sort of stuff is all too prone to be buried by requests for patches, pricing, and other consumer info. Carter Scholz

**From:** Michael O'Brien

**Subject:**MIDILisp for the Mac??  
Well, Steve Pope at ParcPlace Systems has what looks to be a fabulous MIDI system done in Smalltalk. It'll run on a Mac II, and given the fact that the latest ParcPlace Systems Smalltalk a) supports user-written primitives, and b) runs under \$1,000 on the Mac II, plus the fact that with Smalltalk, you get full source to the entire world, it looks like the ultimate "kickass" MIDI system to me. I can't wait.

Mike O'Brien

**From:**David Phillip Oster  
**Subject:** Re: MIDI for the Mac??

I would be cautious of using any of the available MIDI drivers for the Mac now that MIDI drivers are built into the Mac operating system.

They went in System 6.0 for the MacPlus, (or the 512KE) and have been in the Mac II Roms all along. They are documented in Inside Mac Vol 5. (the Sound Manager). They require that the user connect a midi interface to the modem port before starting the program. And best of all: they allow multiple programs and multiple tasks to share the midi port. You can create unix style pipelines that filter and manipulate midi data! You can use the Mac's own sound generators as an additional MIDI synthesizer. I'm hoping that Apple will work with the software vendors to make Apple's software the path of choice to MIDI. I'd sure like to write filters and accessories that work with other peoples' sequencers and librarians.

David Phillip Oster

When you asked me to live in sin with you I didn't know you meant sloth.

**From:**Michael S. Czeiszperger  
**Subject:** Re: MIDI for the Mac??

I hate to burst your bubble, but I communicated with someone from Apple's sound lab via PAN, and he said that we shouldn't count on those MIDI drivers actually working as described. Also, I've read the Inside Mac section on MIDI, and the Sound Manager is almost entirely designed for controlling internal Mac sound stuff. There is only the most vague reference to passing raw MIDI to and from the port, which is one of the things which supposedly isn't working. Well, they had good intentions...

Michael S. Czeiszperger



"The only good composer is a dead composer"

**From:** Nick Rothwell

**Subject:** Re: **MIDI for the Mac??**

HOORAY! I've been worried all along about all these MIDI programs doing unpleasant things with interrupt routines and so on, mainly because of Multifinder. This is Good News. Any info about the performance of the drivers when hit hard with MIDI data?

>They require that the user connect a midi interface to the modem port before starting the program.  
<

Oh. No printer port? I thought that the two ports were supposedly identical (except interrupt priorities). I consider two input ports, and 32 output channels, pretty essential.

>I'm hoping that Apple will work with the software vendors to make Apple's software the path of choice to MIDI. I'd sure like to write filters and accessories that work with other peoples' sequencers and librarians.<

Likewise. The ability to task-switch a patch editor and a sequencer, with no worries about device driving, would be great. Shame it's taken so long, though. The Atari has really caught on here in the UK, and some software vendors are getting switcher-like systems going now. (Not Atari themselves, though. Tell me: do Atari do any software support AT ALL for these machines? Hmm.) If Apple really want to dominate the music market (although it's too late here in the UK, the Atari has it.) then they should sell the Mac+ for a reasonable price. I'm lucky, I could afford a Mac+ - just (and, I also hate the Atari.), but for others, it's just no contest. David Phillip Oster

**From:** David Phillip Oster

**Subject:** **Work for Hire contracts**  
An Open Letter to Contract Programmers.

Many contract programmers now work on a "Work for Hire" basis. The definition of "Work for Hire" means that all writings produced within the scope of our employment are owned by our employers. "Work for Hire" is completely unfair. Think twice before you sign any "work for hire" contract, and better yet, refuse to sign. Contracts of this sort steal from us the very professional competence that made us attractive to

our employers in the first place. In addition, there is a class of contract employees who habitually produce works for companies, and who are never requested to sign such onerous contracts: the very lawyers who write our contracts.

One test I use for the power of a software tool is the Recursion Test: would this tool have been useful in the creation of itself? Examples: It is easier to write a C compiler in C than in assembly language. It is easier to write a parser generator if you already have a parser generator to express the input language. In each case, the tool is worth writing because it offers leverage in at least one task. Now let's look at a "work for hire" contract.

Let's apply the Recursion Test to it. A lawyer made a contract with the company to produce that document. That lawyer certainly didn't accept a work for hire agreement: it would have prevented him from selling similar contracts to any other firm. Why should you accept worse terms than the author of the contract? A lawyer and a programmer are both highly trained professionals, well acquainted with the body of knowledge that comprise our respective fields. Both sell complete documents to companies, contracts in one case, programs in the other. Both build their personal experience, embodied in the components that make up the complete works. Only the lawyer retains the right to use those components in future works. Why? Because we have not stood up for fair and equal treatment. Sign contracts that let firms buy our complete products, but retain your ownership of the pieces. Hold out for at least as good terms as the lawyers who write the contracts we are expected to sign! David Phillip Oster

**From:** John Repko

**Subject:** Re: **VIP Question**

I've used VIP for about a year and a half now, and I've found it both a productive and useful interface to the Toolbox and other Mac internals. The early versions (2.0 and 2.2) were useful for prototyping Mac applications, and 2.5 has been enhanced enough (better window event support, etc) that one could very well create an entire Mac application using VIP in

conjunction with a Think C or MWP translator.

The development environment uses a MacPaint-like palette to provide point-and-click access to subroutine calls, organized (roughly) by Manager. VIP routines provide an object-oriented "feel" when used to create and manage the cursor, standard window types, dialog boxes, and the other standard parts of a Mac application. Because it is laid out along the lines of Inside Macintosh, VIP serves as a good intro to the machine. A VIP program is essentially a flowchart of VIP calls, with constructs provided for branching, if-then-else, and case statements.

Programs can be structured with user-defined subroutines, complete with parameter passing and local variables. Navigation around a program is adequate - about as good as anything you'll find in a quasi-hypertext style editor. As an interpreter VIP provides a quick turnaround in an Edit-Run cycle, and provides a reasonable debug environment for step-by-step evaluation of code, local and global variables. To produce compiled code a number of translators are available. The translation step is fast, but produces calls to VIP supplied libraries rather than target-language source files. VIP does have weaknesses. It is still necessary (and not always simple) to augment VIP-generated programs with C/assembly code if you want to provide anything not strictly part of the Mac style guide. Navigation in the editor and (particularly) the debugger could be improved; the general interface style may not appeal to those familiar with more textual modes of program generation. The product has made considerable strides from 2.0 to 2.5, and does provide a good Mac programming interface and one of the better non-textual programming environments presently available. I have no affiliation with Mainstay, I just like the product.

John Repko

**From:** Delphi

**From:** HALL

**Subject:** **Disk cataloger**

I need a disk cataloging program that:

1. Makes two lists of disks, one

listing files, sorted by filename, giving diskname, pathname, type, creator, date(s), size, etc., but MUST show the comments from the Get Info box. The other list should list the disks sorted by disk name, show the contents of the disk's get info box, and then list the files on the disk by filename, preferably showing type, creator, etc., and MUST show the comments from the Get Info box.

2. It shouldn't catalog the contents of my hard disk(s) along the way...

3. It should output the file in text (at least) format. Any other options/goodies would be great, but all I'm doing is producing a printed list of disks/contents available from my UGS' libraries. It should also be capable of handling at least 1000 disks, but 100 or so would be OK. ;- ) I know that DiskQuick 2.10 does most of this, but it doesn't show the Get Info comments in the listing by filename (I think; maybe I should check it...).

Thanks, Brian

**From: JEFFS**

Subject: RE: **Disk cataloger**

You should be aware that Apple has provided \*NO\* way to access the Get Info comments nor are they currently willing to tell anyone how to do it. They told me it WILL be changing in future Finder's. Thus, if you happen to find such a program, it WON'T work with future Finder's. You'll have to wait until Apple provides a standard method that will work across all Finder's.

Jeff

**From: RAMARREN**

Subject: RE: **Smalltalk V/Mac?**

Apple Smalltalk 0.4 is usable (particularly on a II; the performance on a Plus I find too slow to allow me any forward motion :-)). ParcPlace Smalltalk (the latest one, VM 2.3 release) is compatible with all Macs with minimum 2Meg memory. Quoting from frangible memory: Dorado Benchmark = 100

Mac Plus 29

Mac SE 35

Mac II 110

(I believe this to be true... I am extrapolating from the VM 1.1 specs, VM 2.3 is a mite faster and there is one version for all machines, unlike VM 1.1). In particular, the speed of (to me) the most critical part of a develop-

ment system, the editing, is more than acceptable even on the Mac Plus, and down right cushy on the Mac II. ParcPlace Smalltalk comes with a nice selection of tools for use with the Mac, including some fileIns for reading/writing of MacPaint documents as Forms, color support for the II, a PostScript output formatter for LW output, full MultiFinder compatibility (yeah, lots of memory...) and an image can be quite large - up to 16 MegBytes. If you are in need of supporting something fairly unusual, like weird IO drivers etc, there are instructions for constructing up to 255 new User Primitives in MPW C and generating a Smalltalk interface to your odd needs. The support is excellent, the people at ParcPlace are good (NOTE: I am biased, friends work there) and the system is suitable for real applications development.

By comparison: Apple Smalltalk v0.4 is a License 1 system in prototype. ParcPlace Smalltalk v2.3 is a License 2 system, fully supported and nicely 'finished', which conforms to the Addison-Wesley source texts with many enhancements and extensions. Apple ST is an on-the-fly interpreter, ParcPlace ST is a true incremental code compiler with very slick tricks.

There is another Smalltalk product that is due out RSN from the Digitalk folks, makers of Smalltalk V in the IBM world called Smalltalk V/Mac. Smalltalk V is a subset of the Smalltalk-80 system with a slightly different grammar and class structure and not quite as large a system. Their Mac system is a departure from the A-W Smalltalk, utilizing instead a Macintosh Menu/Window interface. It's supposed to be runnable in a 1Meg machine.

I know little else at this point in time (I've only seen announcement screenshots) and don't have much experience with Smalltalk V in any form to make any plus or minus comments. Others who have been using it say that it is functional and projects have been completed successfully with it.

godfrey 8/19/88

disclaimer: I speak for myself, not ParcPlace, but I do have friends there so I am a little biased. The Apple st offering has the advantage of being very inexpensive for

learning st.

**From: NOFAL**

Subject: RE: **Smalltalk V/Mac?**

I agree with you that ParcPlace Systems has a great Smalltalk system. It's the BEST, but you pay for what you get. Apple ST costs \$50 and PP costs just under \$1000 I think. I think that they should bring down the price to about \$500 so to compete with other development systems. I think that Smalltalk is the BEST language ever created and that now that we have FAST computers like the Mac II it's time to start using it.

But until it's relatively cheap it won't outsell languages like LS Pascal or C that under \$200 offer a good value. I know that the Xerox liscense is expensive but they won't sell into the mass market with those prices. Smalltalk is great for both beginners and experienced programmers and should be available for both of them.

Danny

**From: BRECHER**

Subject: Re: **Suitcase upgrade**

Suitcase II, unlike the original Suitcase, does not look for specially-named files or folders at startup. Rather, it opens whatever files were open before (unless you tell it, when opening a file or files, that they shouldn't be remembered across reboots). Thus you must open your "permanent" suitcase files once after first installing Suitcase II.

You can, however, open all the files in a folder in one operation. You can "Show All Types" by clicking a checkbox (or typing its key equivalent) in the file opening (SFGetFile) dialog. Hence no patching is required for nonstandard file types. Beep sound files with types SFIL or Sng2 are considered standard. Suitcase II will (in a "Power User" Settings dialog) allow you to alter the boot blocks of the startup disk so that the file system will allow more files to be concurrently open, and hence allow more suitcase files to be concurrently open. In this way, you can have up to 99 suitcase files concurrently open. The default maximum is 12.

Steve Brecher (author of Suitcase II)

**From: APERLIS**

Subject: **MenuEdit 1.2**

I finally got ResEdit 1.2b2 from



Apple and find it fairly nice, except the following:

\* It runs out of memory if you've opened a lot of resources without quitting in between. It seems that it somehow keeps everything in memory non-purgeable. I was just looking at everything in the System file, closing each resource after I looked at it, and near the end I had memory problems. Weird.

\* If you simply open the System's 'cctb' or 'wctb' and then close it, all the control and window colors are messed up. This seems related to the previous problem. Somehow ResEdit is getting the resource into memory and not releasing it back to the system. So the system can't find the color tables and everything becomes black.

\* The awesome ResEdit patch MenuEdit (version 1.2) has some interesting quirks: The close box does nothing (neither does the Close command), but the menu line above the Close command closes (so menu item numbers seem to be off). Also, changes are never saved. Perhaps these are all bugs in MenuEdit... Any comments and any ideas when this stuff will be fixed? Thanks.

**From: MACNOSY**

**Subject: RE: MenuEdit 1.2**

Apple, in their wisdom, changed the program interface for ResEdit pickers /Editors in the 1.2b2 release.

Here is a patch developed by a friend of mine, Harry Starr:

Patch #1: (Repair menu item positions)

5340 6716 5940 6730 5340 6736  
5340 6700 0200 5540 6722

xxxx xxxx 5B40 xxxx 5540 xxxx  
xxxx xxxx xxxx 5740 xxxx

Patch#2: (Fix menu enable flags)

3F3C 0002 2F3C FFFF FEE3

xxxx xxxx xxxx xxxx FBC3

Apply to a copy of ResMenu 1.2

- Enjoy: Harry Starr

Hope this fixes your problem  
Steve

**From: DRITTNER**

**Subject: Mac price increases**

**An Ode to Apple**

by Don Rittner

There once was a little boy named Steve who planted a small apple seed. From the seed it did grow, and its branches did flow, reaching from sea to sea.

Now onto these branches grew little red fruit, its harvest, Steve hoped, would be the best. His

apple tree was becoming big and strong and passing all the tests.

Now Steve wanted all to share in the harvest yes, you, me and all the herd. And so he proclaimed let those Macs remain and his following spread the word.

Now little boy Steve was content with his tree it bore fruit year after year after year, but his friend little Johnny yelled an orchard could make more money and then we could compete with the pear.

So Johnny pushed Steve from the orchard, and told the world his apple would taste like the pear. So those with more money than the original pickers would hopefully buy more than their share.

The apple got bigger and Johnny was chipper but somehow failed to see, that those original pickers would soon go flipper over the price increases and leave!

Now the pickers Johnny courted came from pear country and were imported, they didn't grow up with the tree. The bigger the price, Johnny was rolling the dice, he didn't know how it would be.

And so Johnny looked good for a while as his apples got bigger in style. So pear growers agreed, to make the pear like the apple they need, johnny's ego got tattered.

So he threatened and sued to keep those pear growers in check, and his apples began losing their shine. But Johnny shrugged his shoulders, he said heck a pear shouldn't act like an apple this time.

Now Johnny was happy to throw them a curve and stood under his apple tree eager to observe.

When his apples grew bigger and tasted the best, he yelled "Let the world pay the most for the biggest and best." But all those pear pickers didn't jump ship in fact, they didn't think Johnny was that hip.

So the biggest and best soon fell from the tree cause poor little Johnny didn't understand gravity. As they crashed to the earth he looked for the MUGS to reach out their hands, embrace, give him hugs.

But the story ends sadly as you will see, those skyrocketing prices sent everyone back to Steve. As Johnny looks bewildered, dumbfounded, perplexed, he hears from a distance.....NeXT!

copyright 1988, Don Rittner (as though someone would steal it, right!)

**From: CHUG**

**Subject: beginning MIDI**

I'm looking for suggestions on what I ought to buy to put together a MIDI system based on a Mac. Since I'm just starting to research this, I'm not sure what I need, much less what is best, so I'm looking for any and all feedback. What I'd like to do is be able to compose either on the Mac or a keyboard, play it back, record it to cassette, print scores, and generally muck with the sound once I get it onto the computer. I'd love to do all that for about \$500. So, the questions: What do I need/want? What would be a good system for about \$500 that would do what a beginner/hobbyist needs? (and is potentially expandable?) What about a budget of \$1000? thanks, chug

**From: SYNTHONY**

**Subject: RE: beginning MIDI**

The proliferation of products in the price range(s) you mentioned would take quite a while to describe in print. It will come down to what features on the instrument you want, same with software, and still stay in your price range. Some instruments that can play multiple sounds (sorry, K1) at about \$800, or something like a Yamaha DX100 with small keys (\$389). Of course, there are other instruments to choose from. The software would be anything from a simple notator such as DMCS V2 (\$69) all the way up to Finale (\$995). If you have the time, give us a call at (800) 221-KEYS and we can better describe what different instruments & software packages do.

Bill Synthony Music



**Info-Mac** digests consist of submissions by individuals on the academic computer networks. Submission and distribution of these digests is by network, moderated by volunteers at Stanford University.

**Usenet** is a loosely-coupled network of co-operating academic and commercial computer systems. It is a non-profit network whose primary aim is the sharing of technical information and the spreading of research results.

**Delphi** is a commercial time-sharing and bulletin board system. The Delphi Digests are made available thanks to Jeffrey Shulman of Rutgers University.

# Mac D/A's

## Mike Tickle looks at three useful Desk Accessories, published by Solutions, Inc.

I have decided to do one review of two packages written by Solutions International named respectively The Curator and Second SmartScrap & The Clipper (SS & TC). Hardware requirement is a Mac 512K or larger, check which finder and system. The documentation is the 7-1/4" x 9" booklet format, easy to read and plenty of space around text and pics.

Installing on a hard disc or 3.5" is done by using Font/DA mover. There is one on each master, in case you can't find your own. The masters are unprotected. They both take up less space in memory than on the system disc because of overlaying. SS & TC need 50K, The Curator takes 100K on each system disc. The Curator requires at least 2 floppy drives, 1 of which is 800K or a hard disc would be fine.

### SmartScrap & The Clipper

**SmartScrap** is the easiest of the three D/A's to use and understand. It is used in exactly the same way as the scrap book excepting that you may open a variety of SmartScrap files on different discs/folders, or scroll over text or pictures larger than the screen, select and crop parts which are cut or copied to the clipboards, delete pages. The first time you use SS with a scrap book file, SS builds a table of contents- if there is enough room on your disc. You can then select from 12 pages shown in one screen by double clicks or "show" button. If you prefer text instead of pics in your content table, and the page is a mixed page saved to an SS file, this too is a choice available.

Having your scrapbooks so well organized, choose from SS the page of your choice, select the area to be copied or cut to clipboard and cut or copy.

**The Clipper** is a D/A used to modify the contents of the clipboard before pasting to your document.

Assuming a Macwrite document, activate the Clipper and a rectangle appears with handles on each side. The numbers in the handles show the location of the frame in pixels, move

the frame about by click-drag on the handles.

Top left is the fixed reference for the frame when you click-drag on the lower right 'grow' icon, thus the aspect and size of the frame is altered. As the frame is transparent you may size and position it with reference to existing data on your document.

To see the clipboard, select Clipper menu and drag to show contents. To modify you may scale or trim, to fit or not as the case may be. Keep proportions if you wish. Scaling and trimming may be done visually or by numbers. There are a few other functions: slow scroll, select types and revert to original. I missed rotate by degrees and flip or mirror which I thought would go well with the concept of the clipper but nevertheless a neat D/A.

### The Curator

**The Curator** is a D/A or programme (two forms), which locates and/or copies graphics on any Mac disc. The location process provides information as well as finding a chosen picture. There are several methods for doing this, more through folders and disc selecting and clicking as usual. Search by name or part of name, by keywords or by thumbnails. All of these search criteria may be narrowed or broadened by clicking on 8 types of document buttons.

Pict, MacPaint, IBM EPS, PostScript, TIFF, Glue, Mac EPS, and All. Pictures fitting the search criteria are shown as thumbnails or names in a scrollable window, ready for selecting. Upon selection, information on Type, Creator, when created and when changed is displayed.

To do all of this curator must have its own catalog, which it updates each time a document is opened that is new or moved. If your disc has a lot of graphics not seen by the Curator before, then the Curator's Assistant is a program you may run to build or add to the catalog whilst having a cup of coffee. Keywords may be added, copied, or deleted freely.

Conversions: A very useful set of

functions. There are limits, though. MacDraw format cannot be read and there is no PostScript translator. Apart from this, most formats can be copied or converted to another format:

From	To
MacPaint	MacDrawPICT Glue TIFF
MacDrawPICT	MacPaint Glue TIFF
Glue	MacPaint MacDrawPICT TIFF
TIFF	MacPaint MacDrawPICT Glue
MacintoshEPS	MacPaint MacDrawPICT Glue TIFF IBM EPS PostScript
IBM EPS	MacPaint MacDrawPICT Glue TIFF Mac EPS PostScript
PostScript	None

**Copying:** Copying is cut, too. You may select part or the whole of a picture to copy to the clipboard then to SmartScrap or other applications.

**Printing:** This is equally easy, follows Mac standards exactly and will print to any printer for which MacPrinter 'drivers' have been written. PostScript is used, if appropriate.

### Remarks

The descriptions I've given are not definitive. There are additional functions but I have tried to cover the important things you can do. The only thing I could not do which I wanted was to convert a PostScript file to MacDraw object format. It must be very perverse of me wanting to do such a thing.

info

**Products:** The Curator  
SmartScrap & The Clipper  
**Publisher:** Solutions, Inc.  
**Available from:**  
MacLine  
(Please see page 53)

	Curator	SS&TC
Price :	£89.00	£39.00
Value:	★★★★	★★★★
Perf. :	★★★★	★★★★
Doc. :	★★★★	★★★★



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# DataDesk

## Bill Pearce reviews this statistical tool from Odesta Corporation

**Data Desk** is what computers are for. *En route*, they stopped to play with Space Invaders, Adventure Games, Word Processors, Graphics Packages and DTP. But we all have to grow up some time. Even a spreadsheet only does what an ancient Greek did with his abacus:

of the spectrum, a spreadsheet (you know which one I mean), allows us to enter our initial data and a few rules. The spreadsheet then calculates hypothetical **data**, given the rules and the initial data. At the other end of the spectrum, there is **Data Desk**.

Feed it your data, and it allows you to **discover** the underlying rules. The starting point, the initial data, may be entered directly or imported from spreadsheets, databases or word processors.

**Data Desk** comes from the same stable as **Double Helix**

and Summary statistic windows are bristling with HyperView buttons (signaled by the cursor changing to a button hand). Although DD relies on a multiplicity of icons and windows, the quibbles that I had with **Double Helix** on that score have been neatly side-stepped. The icons are for the most part tall and slim; they **must** stack neatly in an ordered horizontal row in their correct bundle. As for calculations (oh! those clumsy **Double Helix** tiles), they are typed in simple notation fully explained in just a few pages.

It would not do justice to **Data Desk** to describe it simply as a tool for analysing data. It is that and more. The user is encouraged to discover views and analyses that would otherwise not be possible. At every step, HyperView buttons suggest new avenues to explore. **Data Desk**, like **Double Helix**, comes with a Quickstart pamphlet. I cannot imagine anyone simply skipping through Quickstart at full lick. There is so much to explore at every turn: the temptation to browse is irresistible.

The Utilities Disk has some 16 example data files. Every data file has an editable Reference window (fig 3) in which the user will type information about that particular collection of data. Not content with just this reference window, DD creates an Info window for every icon, just like the Finder's 'Get Info'. For good measure, you may ask for additional scratch pads. The main window is a 'bundle' window that stores the icons for the initial data to be ana-

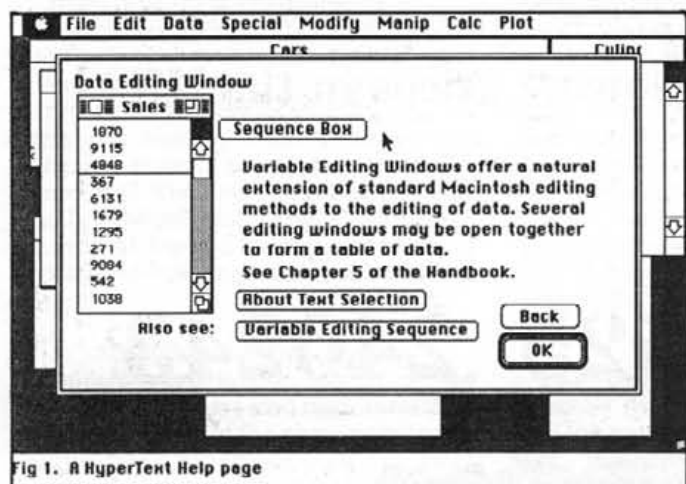


Fig 1. A HyperText Help page

cus: it just does it a little faster.

Who is DD for? From professional statisticians down to anyone who wishes to know a little more about their data. There is no way a mere review can tell the professional what he/she might want to know. Every page of the Handbook is packed with information of importance and interest. As DD started out as a teaching aid, to teach statistical concepts, the non-professional need have no fear - the documentation **teaches** statistical principles and methods.

How to characterise **Data Desk** as simply as possible? In the beginning there were **data**. And Apple said 'Let there be Macintosh'. And Macintosh shone a great light on the **data**. At one end

and shares many of the admirable features of that database, such as the sure control of the data and of the Macintosh interface. For example, DD has its own desktop that is a much enhanced version of the Finder desktop. Depending on the machine and the system, DD directs calculations to the fastest floating point unit available consistent with maximum accuracy. The Help file is a stack of Hypertext windows (figs 1 & 2). **Data Desk** Plot

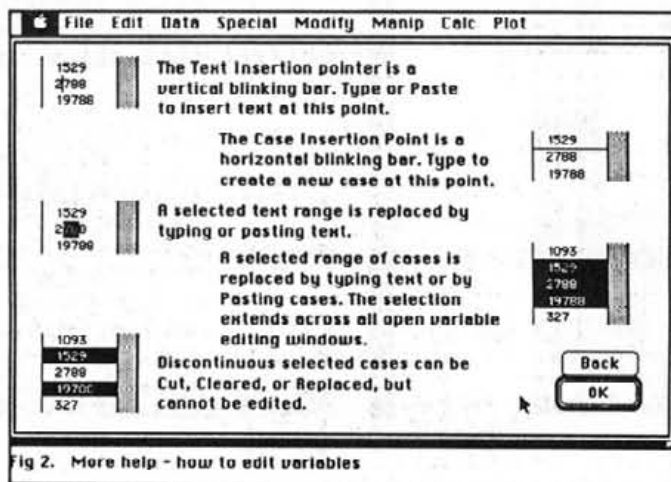


Fig 2. More help - how to edit variables



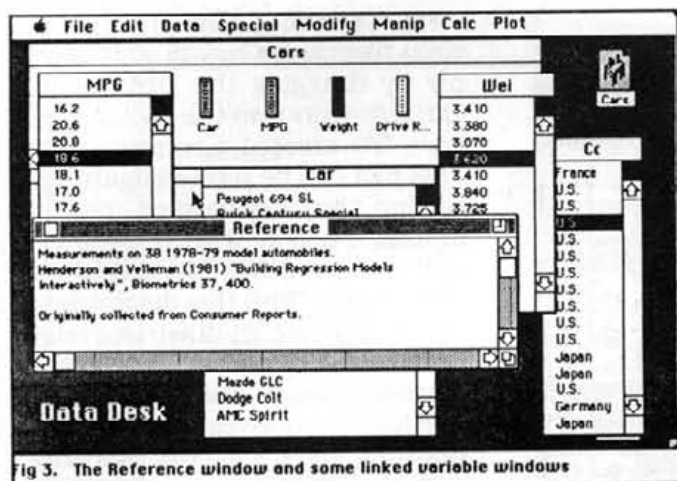


Fig 3. The Reference window and some linked variable windows

lysed. The commonest icon here will normally be a variable icon. The 'Cars' window is the main bundle window. Some of the variable windows are open - car, MPG, weight, country. As these windows are 'linked' (they could be 'unlinked'), any 'case' that is highlighted in one is highlighted in all. Furthermore, if one of the lists is scrolled, all the linked lists scroll. At this stage one can usefully think of these linked cases as the 'records' in the car file, and each variable is a field. DD has simply exploded the file. From this point on, it becomes more and more difficult to visualise the connection between the static 'database' view and the increasingly complex DD views. Of course, after a relation has been revealed, it would always be possible to extract the data from the database in such a way that the relation became apparent: or your spreadsheet could be modified to project the data in order to reveal the relation. But we must not put the cart before the horse. It is always

variables. We are about to create a simple DotPlot to view the relation between MPG and country. The first variable selected will be on the y axis, the next on the x axis. The third would be on the z axis.

More may be selected - the handbook discusses how these would be handled.

Fig. 5 shows our DotPlot. Let us look first at some of the other windows in this screen. The work window is a second bundle window that stores an icon for every operation created during the session. An icon may be dragged to the original bundle window if need be, though one of the enhancements introduced by DD is the facility to select items from different windows.

easy to see anything once someone else has seen it and pointed it out. Neither the database nor the spreadsheet is a good tool for **discovering** the relation.

Fig. 4 is a Help window that explains the significance of different highlighting of selected

properties of this screen are a foretaste of the goodies to come. Mention has already been made of the Hyperview buttons, mostly invisible, that prompt pop-up menus suggesting further possible lines of enquiry. The tools window (fig 6) offers a variety of tools for manipulating data in a plot window. The small tools window simply sets the selection mode. One familiar tool is the grabber. This, as you would expect, moves the plotted data. The plot window appears to have four regions: an L-shaped region for the axis labels; a vertical strip for the y gradations and a horizontal strip for the x gradations - in this case simply names of countries; finally the plot rectangle. These regions are not visibly demarcated of course. You or I would be

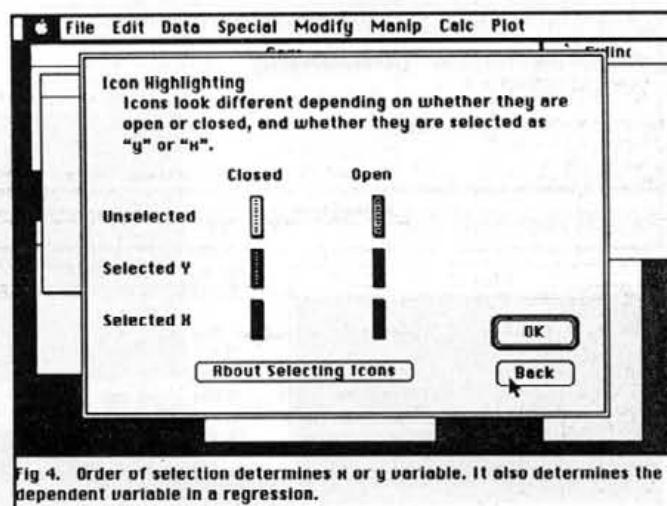


Fig 4. Order of selection determines x or y variable. It also determines the dependent variable in a regression.

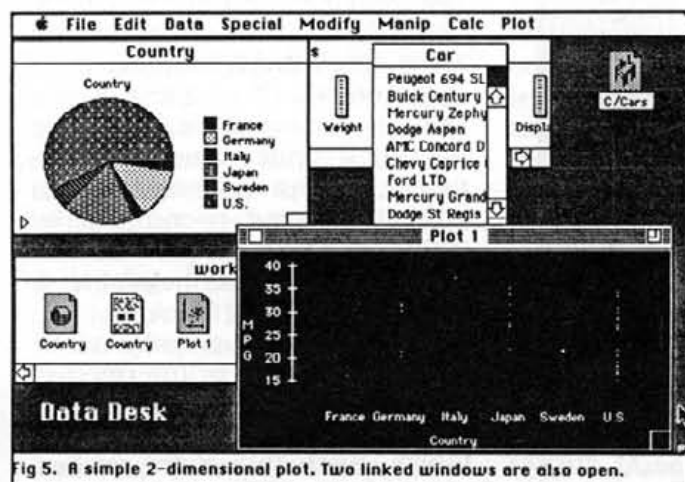


Fig 5. A simple 2-dimensional plot. Two linked windows are also open.

There is a pie chart of the data. Pie charts and bar charts are available on demand. In order to create the plot we selected first MPG then country and finally the DotPlot menu item. The plot is white on black on screen but prints black on white. The

quite content to keep all these regions discrete. **Data Desk** overlaps the plot into the x and y gradations - gimmicky if you like, but fascinating to watch.

Another tool enables an individual dot to be selected, whereupon its value, as read from the frontmost open variable window, is printed alongside it. There are however far more impressive demonstrations of interaction than this. If we were to select any slice of the pie chart, or any country name on that chart, all the cases encompassed in that selection would be highlighted in any open view. This would not be of any help in Plot 1, as the cars are already viewed by country. But in Plot 2 (fig. 7), where they are distributed by weight, highlighting by country has some significance.

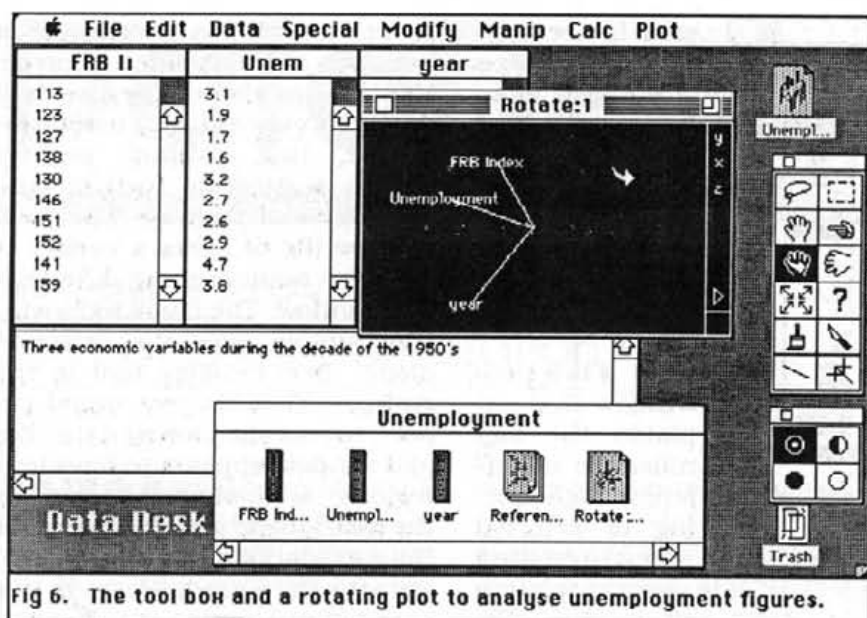


Fig 6. The tool box and a rotating plot to analyse unemployment figures.

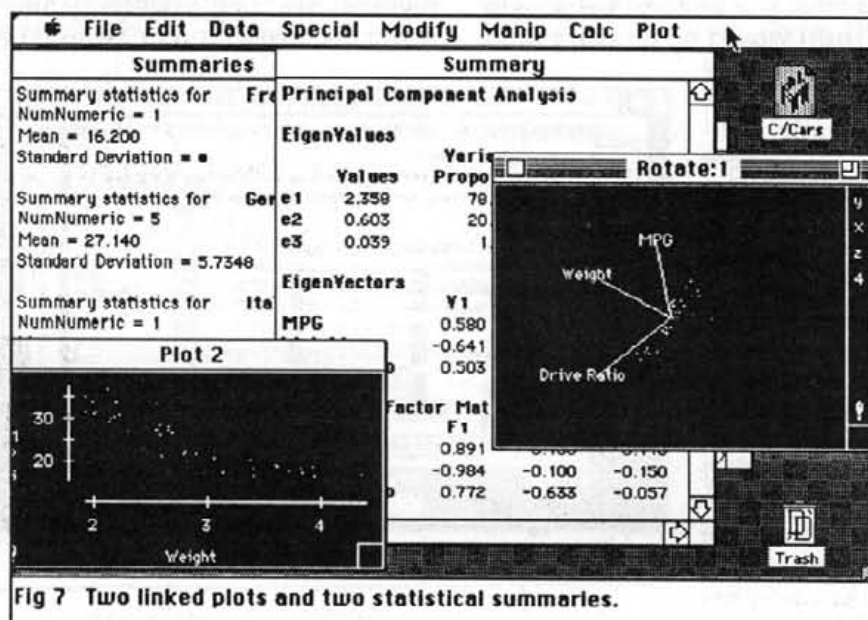


Fig 7 Two linked plots and two statistical summaries.

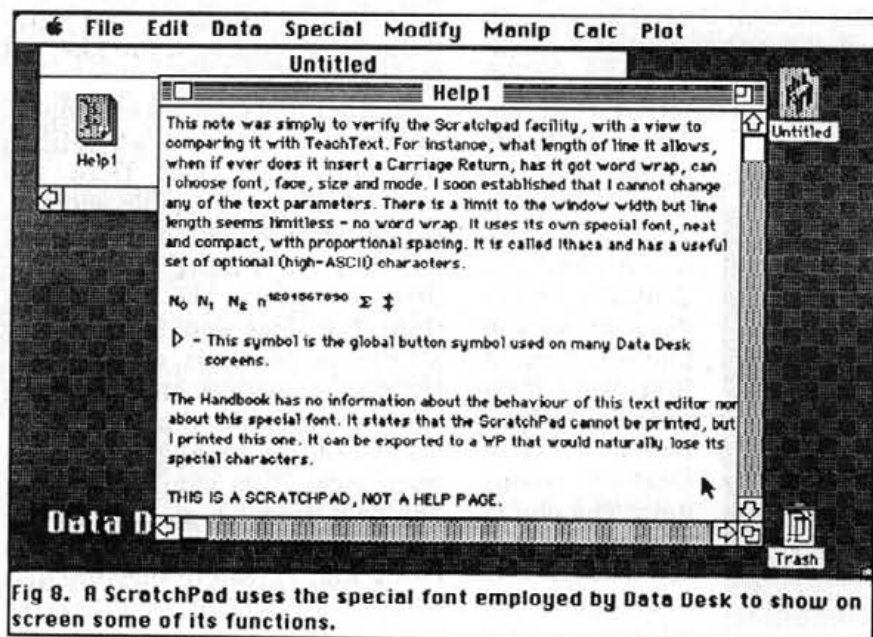


Fig 8. A ScratchPad uses the special font employed by Data Desk to show on screen some of its functions.

Fig. 7 provides a brief glimpse of what **Data Desk** has to offer. Simply by dragging the Drive Ratio variable icon into the Plot 2 window, DD created a rotating plot. This plot can be rotated in any direction by keypresses or by mouse. Push it with the mouse and it continues rotating until told to stop. With this display it is possible to 'see' multivariate relationships without having the mathematics to calculate them. The handbook gives the history of Rotating data systems, starting with the PRIM-9 system in 1972, the basic operations necessary being Projection, Rotation, Isolation and Masking. The 9 represents the maximum number of variables catered for in that first system. Principles are explained simply and logically. One interesting tidbit: would you have realised that a 3D view of data **must** ignore perspective?

Rotating plots show trends that cannot be illustrated in a static graphic environment. The handbook aptly points out that DD is not a presentation program. It employs its own special font - Ithaca - whose special characters will be lost if exported as a text file. Various export options - PICT, Bit map or tab-delimited text according to type of data, can ensure that special characters / maximum resolution are preserved as appropriate.

Let us now suppose we have two or more plots open side by side, plus perhaps other linked views. The brush tool performs a most amazing feat. It looks rather like the MacPaint eraser. It is resizable. Brush over your plot. The brush acts as a mobile selection box. All cases within the box are highlighted, and so are those same cases in all the other open linked views. Of course it is one thing to see a pattern: it is quite another to understand its significance. This is a relatively new field only now being opened up by computer programs such as this. The handbook is as helpful as it can be, suggesting sources of further information, possible techniques for finding or interpreting 'interesting' views and so on.

Fig 7 also shows two summary tables. Such tables are created



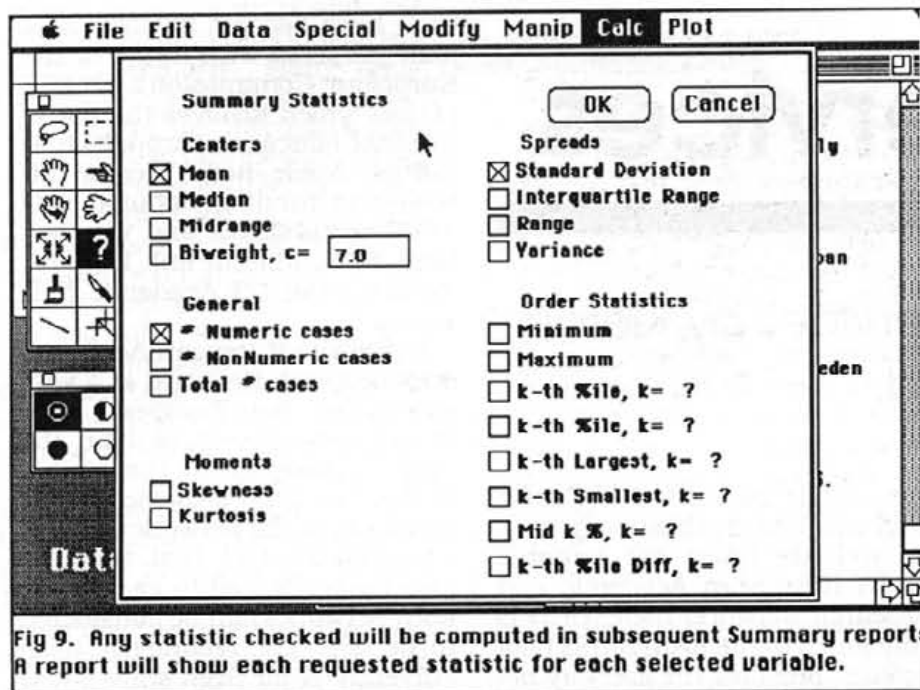


Fig 9. Any statistic checked will be computed in subsequent Summary reports. A report will show each requested statistic for each selected variable.

simply by selecting the variables and the appropriate menu item. The tables themselves are now available for modification or reuse. Drag another variable to the table and it is immediately assimilated. Effectively you create a database within a database within a ..... ad infinitum.

#### Derived variables & transformations

Derived variables are defined by an algebraic expression. They are recalculated whenever their underlying variables are changed.

#### Hot, warm and cold objects

One cannot fail to be impressed by the sound common sense of **Data Desk**. It not only does the sensible thing: it finds a way to let you know what it has done and why. The best example of this thinking is in the policy of 'warm updating'. First, cold updating applies to the raw data and any expressions typed in to define derived variables. These naturally can be changed only by directly editing them: no other operation can change them. At the other extreme is 'hot' updating. You would naturally expect derived variables to update automatically if you change the underlying data or the defining expression - and update they do. But if we look one step farther, into analyses and plots say, then there is no automatic updating. What does happen is

far more helpful. A warning button appears on these windows, rather like a fat exclamation mark. Its pop-up menu offers the option to update the present window or create a new window to reflect the update. It is thus possible to keep a record of earlier values for comparison.


Fig 8 shows the largely undocumented ScratchPad. This is not a complaint. Like the scratchpad in the Get Info windows, you simply use it to find out how it works.

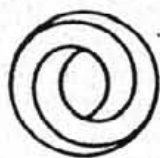
**Data Desk** does everything you would expect a statistics package to do - mean and standard deviations, scatterplots and histograms, regressions and principal components analyses. It comes in two versions, *Executive* and *Professional*. It is the Professional version that is reviewed here. It would appear that the features specific to this version are Regression analysis, Residual analysis and Transformations, but I cannot give a definitive list without seeing the appropriate manual or menus. To be really helpful to serious statisticians, I ought to list at least all the menu options. The complete list, with brief descriptions, takes up 101 pages of the Reference Guide. Here instead is a full list of the section headings of the Statistics Guide:

Random Numbers and Simulation - Simple Inference - Comparing Two Samples - One Way ANOVA (Analysis of Variance) -

Multi-Way ANOVA - Simple Regression - Correlation - Multiple Regression - Regression Diagnostics - Cluster Analysis - Principal Components Analysis

Fig 9 is included as a quick view of the statistical summaries available.

The handbook claims that the Macintosh environment makes possible data analysis far superior to that of a mainframe. I can see no reason to doubt that claim. It would seem that the combination of Macintosh and **Data Desk** makes available techniques that are in advance of current theory. In assessing DD for value, I attach great weight to the fact that here we have, in the combined disks and documentation, a complete, dynamic course in Statistical Analysis. I am persuaded by the expositions of the authors, Paul and Agela Velleman, that further progress in statistical analysis will await not improvements in the Macintosh, not improvements in **Data Desk**, but in greater understanding of what these present techniques can tell us. 

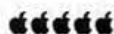

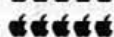


ODESTA CORPORATION

info

Product : Data Desk  
Publisher : Odesta Corp.  
Available from :  
MacLine  
(Please see page 53)

Price : US \$495  
(no UK price quoted)

Value :   
Performance :   
Documentation : 

# U.C.D. Services

## A Report on U.C.D. Services by Kieran Carrick, U.C.D. Ireland.

I am sending a report I wrote for local consumption here in UCD to the list in case anyone finds it interesting. It concerns the facilities on offer here at UCD for the Mac users on the net and the future services we would like to provide. I would like to take this opportunity to thank all of you for making this venture a success and look forward to your support as we enhance the service (and iron out the bugs). Please feel free to pass this on to your local Apple guys or whoever. Regards Kieran

### **UCD, networks and the Apple Macintosh**

University College Dublin (UCD) is Dublin's largest college and is a constituent college of the National University of Ireland (NUI). The modern campus at Belfield south of the city caters for up to 10,000 students and offers undergraduate and postgraduate course in all the major disciplines. The Computing needs of the College are managed by a modern Computer Centre which has a very high profile within college, nationally and inter-nationally. The centre provides mainframe services on IBM, Amdahl, DEC and GEC equipment.

Networking has become a very important part of the work of the centre in recent years both on the campus level and in the broader context of international academic networking. Integration of personal computing with traditional mainframe computing services and the various academic networks is an area in which the Computer Centre has developed a great wealth of expertise and understanding in the recent past. This has been facilitated by the use of the international academic networks and the personal con-

tacts made by Computer Centre staff involved in these activities. As well as being the national EARN (European Academic and Research Network) node, UCD is connected to the RARE MHS Pilot project, provides the gateway between Heanet (the Irish X.25 - coloured books network) and EARN, and also hosts the European Conferencing service EuroKom.

Currently the director of UCD's Computer Centre Dr Dennis Jennings is the president of EARN and the office of the president is located at UCD. This has resulted in many opportunities for the Computer Centre staff who have been very heavily involved in the development of the technical plan for EARN's transition from existing protocols to OSI. This transition is being sponsored by DEC, IBM and Northern Telecom. UCD has been a member of the Apple University Consortium for the past 18 months and during this time the Computer Centre has invested heavily in providing Macintosh oriented services to users in UCD, on National Academic Networks in Europe, on EARN and world-wide on BITNET.

In addition UCD have provided Apple in Dublin with computer facilities and systems programming support for the evaluation of communications software and hardware particularly in the area of connecting mainframe systems to Macintosh networks. Of particular interest here were the Kinetics Fastpath and other ethernet interfaces and software such as AlisaTalk, MacWorkstation and PacerShare. The Macintosh TCP/IP software from NCSA and Brown University are in use successfully at UCD and have been for some time. More recently

UCD have become involved in a joint proposal with Apple to the European Commission's DELTA project which involves the use of distance education through technology. Apple have become involved in funding national networking initiatives and we soon hope to be able to link UCD directly to the US Academic Networks.

EARN (the European Academic and Research Network) is a very successful pan-European academic network modeled on the BITNET network in the United States. In fact because of the similarity of the network technology and the fact that they are directly connected to each other both networks can be considered to be one. The technology used currently is far from state-of-the-art but both networks work reliably and extremely well. Both also have migration plans in preparation to move to a more modern technology.

One of the oldest Macintosh oriented network services is the Stanford Macintosh Software Library and Mailing list service provided on the US Internet. This includes the famous INFO-MAC file server and the accompanying mailing list for discussions on related topics. These facilities were only originally available to users with access to the Internet on host computers running the Internet protocols. This mailing list is now re-distributed throughout EARN and BITNET by Listservers including the Listserver at UCD, which means that the information now gets to a wider audience that includes EARN, BITNET and the many national networks connected to EARN. In addition a library of publicdomain software was made available by the Computer Centre in Princeton University on their MACSERVE software. This was available to all EARN and BITNET users but because of the design of the server was not available to users on the networks attached through gateways to EARN and Bitnet.

At UCD we decided to provide some additional services. First we set up a mailing list for European Macintosh Users to discuss issues arising from their use of Macs. We called the list "Mac-User" and currently there are



users from all over Ireland, the U.K., Europe and the US who use the list regularly. Many other Macintosh bulletin board services re-distribute the information locally. The list provides a contact point for people with related interests, a forum for discussion of technical issues, a means for information exchange and also a means of distributing information and software. Recently we have had to set up a parallel list for the MACTEL Digests from the UK based bulletin board service.

These facilities primarily facilitate the exchange of information between people engaged in academic research but also allow academics to communicate with those commercial organisations which use the Internet. The next step taken by UCD was to provide a MACSERVE for public domain software which is identical to the server at Princeton on the national EARN node in Dublin. The purpose of this was to speed up the transaction times for European users of Macserve and to reduce network traffic on the transatlantic links. This was accomplished easily with some help from our friends in Princeton. To allow users on associated networks such as HEANET in Ireland and JANET in the UK, we developed a parallel server called FILESERV to give these users access to the software. Still in development this server is being used extensively by academic Macintosh users in the UK.

The Open University has a number of subscribers on our lists and one of our subscribers is the editor of the UK Wheels for the Mind publication David Riddle. One of our current goals at UCD is to develop the networking environment, in line with OSI, for Macintosh users. This work fits in with our proposal to DELTA and the project work on X.400 mail systems and OSI protocols being carried out currently by both the Computer Centre and EuroKom. As a centre for the dissemination of information about the Macintosh, UCD has become a contact point for those looking for specialist information and we hope to capitalise on this situation. Recently we have been contacted by the Joint Network Team in the UK who are responsible for the running of the JANET network re-

garding the possibility of finding or developing a coloured books suite for the Macintosh. UCD has been very closely involved with Apple in the exploration of connectivity solutions between DEC equipment and Apple equipment and we have very close working relationships with both organisations. Our goal is to expand and improve our services over the next few years and to establish a centre of excellence in the field of networking Macintoshes. Up to this point UCD's Computer Centre has been concentrating its efforts on providing information, software and a point of contact for Macintosh users in the various network communities. For the future we would like our involvement in developing the networking technology to enable the Macintosh to become a more integrated part of the network. This may involve developing multimedia user agents / interfaces to allow the Macintosh users to use the networks more easily. It may involve research and development work in the area of X.400 mail systems and OSI applications for the Macintosh. An OSI network management system is one ideal project for the Macintosh and we have such a proposal in mind. One project which we would like to establish is an EARN -> AppleLink gateway at UCD. This would be very similar to the recent BITNET->AppleLink gateway project as the technology is almost identical and already developed and would allow us to enhance our existing services and to involve the academic communities more closely with the Apple developers. We see this as a means to encourage the same kind of industry - university co-operation in research & development that exists in the United States here in Europe. At the very least it provides a feedback and consultation service of benefit to both parties. We see a great future for the Macintosh in the academic environment and particularly in the desktop communications area. We have made a start already in this area and we look forward to a positive reaction and to support from Apple for our endeavours.

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Email: <CARRICK@IRLEARN>

## **A Brief Summary of our Current Network Services**

### **Mailing Lists**

We host the Mac-User mailing list, a re-distribution of the INFO-MAC list and the re-distribution list for the MACTEL Digests. All these lists are managed by a server machine called LISTSERV which runs the revised Listserv software written by Eric Thomas. The mailing addresses of the lists are <MAC-USER@IRLEARN>, <INFO-MAC@IRLEARN> and <MAC-TEL@IRLEARN>. To become a subscriber to one of these lists you send a subscribe command to the Listserver LISTSERV@IRLEARN. This subscribe command can be sent as a mail message or an interactive request and the syntax is ...

SUBSCRIBE <LIST NAME>  
<Your first name> <Your second name>

LIST NAME is one of MAC-USER, INFO-MAC or MAC-TEL. First name and second name are as they imply your first and second names. The last two arguments need not be your names but they must be supplied and we suggest you use your names for this purpose. Subscription to MAC-USER and MAC-TEL is open to all but INFO-MAC is only open to users within Ireland or on JANET in the UK as INFO-MAC@CEARN is available to all other users. To send a message to the list compose a mail message and send it to MAC-USER@IRLEARN or MAC-TEL@IRLEARN or INFO-MAC@IRLEARN. You will receive the other entries as mail messages as they are submitted. Further information and assistance is available from Kieran Carrick at UCD and his Email address is CARRICK@IRLEARN.

### **Fileserver**

The INFO-MAC files are available from MACSERVE at IRLEARN if you are on EARN or BITNET. This server will not respond to mail messages but instead responds to

interactive message commands. Commands HELP, DIR and GET are supported. HELP gives further details on MACSERVE usage. DIR causes MACSERVE to send you a directory listing of the files available and GET is the command used to request a particular file. For those without interactive message access to MACSERVE, we have provided FILESERV, again based on Eric Thomas' code, to give you access to the files. FILESERV will respond to interactive commands or commands sent as the contents of a mail file. To see what is available from FILESERV send a

GET MACFILE LISTING  
command to FILESERV@IRLEARN. This will cause FILESERV to send you a file which is the index to the filestore. This file will have an entry for each file available. Each entry will have three fields for example

880213 00000008 <INFO-MAC>; DA-FILESERVER.HQX  
which tells you that the Desk

Accessory file DA-FILESERVER.HQX can be requested by sending a

GET 880213 00000008  
request to FILESERV@IRLEARN. The rather cryptic 880213 00000008 is the CMS filename and filetype by which the file is known to the server and the third field gives the name used to store the file at Stanford originally. A common mistake people make is to mail their request to LISTSERV@IRLEARN or MACSERVE@IRLEARN. LISTSERV will not know of the existence of the INFO-MAC files and will reply to that effect by mail while MACSERVE will just ignore requests sent by electronic mail.

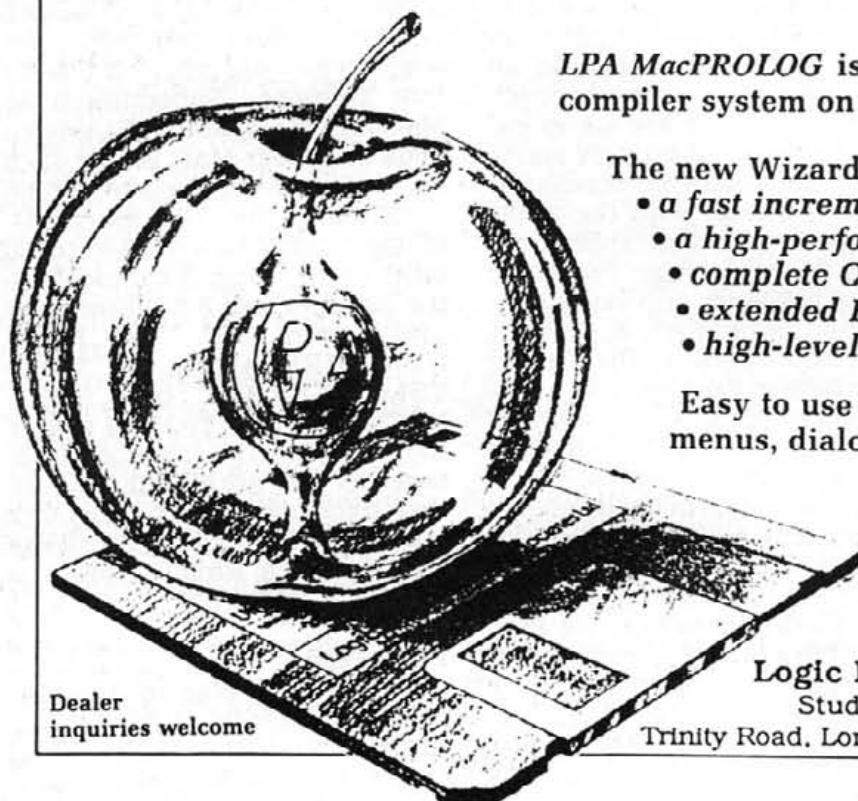
#### Using Files sent by Fileserv or Macserve

When you request a file from either server it will arrive to you in your mailbox on the computer you are using. The next step is to transfer the text of the mail file into a simple disk file. This opera-

tion is dependent on your local host software. If you look at the file you have received with an editor you will typically see a mail header and message explaining what the file is and what it does and who submitted it to Info-mac. Following the mail message you will see a large amount of data in a strange format. This file should be transferred, by Kermit or FTP or some file transfer program, to your Macintosh.

You then need to run a public domain utility called BINHEX against this file. This program takes the file as received from the server and converts it back from a simple ascii text file to a Macintosh file. Sometimes the file produced by BINHEX is a packed file containing many mac files and needs to be unpacked. STUFFIT and UNPIT are two shareware utilities used for this purpose and both are available from the server. The BINHEX utility is fairly widely available in the Macintosh user community. 🍏

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Cricket Pres.	£495.00	£355.00
• Data Tailor Trapeze V2	£295.00	£175.00
• Deneba Canvas 2.0	£295.00	£245.00
• Graphic Notes Music Publ	£595.00	£445.00
• Icon Technology MacAuthor 2	£245.00	£160.00

• IDD MacDraft	£245.00	£165.00
• Insignia Solutions Soft PC Mac	£395.00	£345.00
• Living Videotext MORE II	£295.00	£249.00
• MacroMind VideoWorks II	£195.00	£145.00
• MicroSoft Basic (Cmp.)	£150.00	£99.00
Basic (Intrp.)	£75.00	£60.00
Excel	£395.00	£199.00
Flight Simulator	£45.00	£35.00
Mail 1-4 users	£195.00	£149.00
Mail 5-10 "	£345.00	£249.00
Mail 11-20 "	£495.00	£349.00
Mail 21-32 "	£645.00	£499.00
PowerPoint	£295.00	£199.00
Word V3 Works	£295.00	£199.00

• MindScape Balance of Power	£26.95	£19.50
Deja Vu	£26.95	£19.50
F-16 Falcon	£45.99	£36.50
GATO	£26.95	£19.50
GraphicWorks	£99.95	£54.50
King of Chicago	£29.95	£37.50
Orbiter	£26.95	£19.50
PT-109	£45.99	£36.50
ShadowGate	£26.95	£19.50
Uninvited	£26.95	£19.50
• Nashoba Systems FileMaker II	£199.00	£159.00
• Quark Xpress V2	£695.00	£499.00
• Silicon Beach Software Airborne!	£24.95	£17.50
Apache Strike	£34.95	£27.50
Beyond Dark Cstl	£34.95	£27.50
Dark Castle	£34.95	£27.50
Dig. Darkroom	£295.00	£199.00
Ench. Scptres	£24.95	£17.50
Silicon Press	£54.95	£45.00
Super 3D	£195.00	£145.00

Sup3DEnhncd	£375.00	£295.00
Superpaint II	£145.00	£99.00
World Builder	£49.95	£37.50
• Software Concepts Computer Atlas	£49.95	£35.00
• Software Supply Suitcase	£59.95	£44.00
HyperDA	£59.95	£44.00
• T/Maker Click Art	£49.95	£35.00
C/A PostScript	£129.95	£89.00
WriteNow II	£150.00	£117.00
• Symantec (Think) Capps Prime	£49.95	£37.50
HIS Navigator	£39.95	£27.50
InBox (starter)	£350.00	£235.00
LaserSpeed	£65.00	£42.50
LightSpeed C3	£145.00	£112.00
LightSp Pascal	£85.00	£69.00
S.U.M.	£74.95	£59.00
• Turner Hall Publishing MacSQZ!	£65.00	£52.00

## LASER FONTS

• Adobe Typefaces (Mac or IBM & Compatibles)		
Helvetica Cond., Univers		
Futura Cond. Memphis Light, Eras	each are	£302.00 £265.00
ITC Frank Goth, Univers Cond.		
Futura 1 & Med, Stones, Eurostile	each are	£227.00 £195.00
Sonata, Carta and Park Avenue, Italia		
and Goudy	each are	£75.00 £60.00
All others		£150.00 £125.00
IBM Screen Fonts set of 10		£150.00 £139.00
These are prices for single printers. For multiple printers, prices are approximately twice single prices. Call for details.		
• Casady FluentLaserFonts	£69.95	£49.00

• LaserPerfect LaserPerfect have produced some of the more obscure fonts, eg. Hebrew, Arabic, etc. Call for details		
• Postcraft Laser FX	£155.00	£139.00
Laser FX-Pak	£50.00	£39.00
• Software Complement Compl. Type	£79.95	£49.00

## HARDWARE

Memory (RAM) Upgrades		
Add 1Mb to Plus		£265
Add 2Mb to Plus, SE		£575
Add 4Mb to Plus, SE, II		£1150
Jackie		call
Accelerators for Plus & SE		
Mac20MX-16	£825	£695
Mac20MX-25	£1595	£1345
MC68881-16	£275	£199
MC68881-25	£645	£495
AOX-16	£425	£299
• Dataflex Stradcom Modem	£199	£179
• Irwin Tape BU 40Mb	£985	£895
80Mb	£1280	£1195
• MacCable PhoneNet		call
Apple(Local)Talk SCSI		call
• MacClean Mouse cleaner		£7.95
• Nutmeg Displays 19" for Plus	£1795	£1495
19" for SE	£1545	£1295
19" for II	£1725	£1495
19" Gr/Sc for II	£2595	£2195
19" UI/Vw Col II	£4500	£3495

## HARDWARE BARGAIN OF THE MONTH

**ACCELERATE YOUR PLUS OR SE**

**20MX-16 £695**

**20MX-25 £1345**

For more speed add a 68881 processor and/or up to 4Mb.

• Orange Micro Grappler Mac	£99	£89
• Rodime External SCSI Hard Disks		
S20+ (20Mb)	£575	£385
S45+ (45Mb)	£825	£525
S60+ (60Mb)	£895	£575
S100+ (100Mb)	£1195	£845
S140+ (140Mb)	£1395	£995
S540+ (540Mb)	£5995	£5455
Internal for SE & II		
450RX (45Mb)	£635	£475
600RX (60Mb)	£825	£575
1000RX (100Mb)	£1060	£775
1400RX (140Mb)	£1295	£945
Rodime SCSI hard disks are the industry standard. Built here in the UK, you are buying the very best, with full 12-month guarantee.		
• Summagraphics New Bit Pad Plus	£375	£295
Uninterrupted Power	£350	
(20 Mins to shut down)		
*As soon as available.		
*Unless program not yet released, discontinued, or sale subject to cheque clearance.		

Happy Christmas and New Year



## Toner Cartridges

LW, LW+ INT		
New Black	£69	£71
New Blue or Brown	£99	£105
New Light Blue or Red	£175	-
Recharge	£43	£43
New JUMBO (50% more)	£97	-
Recharge JUMBO	£67	-

**3.5" Floppy Disks Double Sided 100% LIFE GUARANTEED MS 2DD £16.00 for 10**



Hands		
Christmas		
Children		
Education		
Food & Drink		
Food & Drink 2:		
Men's Heads		
Nautical		
Performing Arts		
Recreation		
Sports		
Travel		
UK Atlas		
Weddings		
Women's Heads		
PostScript Atlas UK		
PostScript Tourist Symbols		
PostScript 'Tourism' Font		
GreyFonts LW+		
GhostFonts LW+		
FractionFonts LW+		
FractionFonts LW+		
Business Forms		

## instant art 300

## PostScript & 300 DPI Graphics and Fonts

	300 dpi	75 dpi
2.4Mb of hands with tools, food, holding cards, etc.	£59	£29
4.8Mb of Festive season images	£59	£29
4Mb of images of children doing what children do	£59	£29
3Mb of educational images, from all ages	£59	£29
4.8Mb of illustrations of food and drink	£59	£29
4mb more of illustrations of food and drink	£59	£29
3Mb of illustrations of men's heads in various activities	£59	£29
4Mb of of sea associated images, from the beach, to over water & under it	£59	£29
3Mb of theatre & stage related images	£59	£29
3Mb of images of recreational sports. Ballooning, skydiving, archery etc.	£59	£29
3.2Mb of EPSF files of the UK with roads, railways, counties, cities etc.	£59	£29
5Mb of illustrations of the worlds major sights. Pyramids, Eiffel Tower etc.	£59	£29
75 dpi files of the UK with roads, railways, counties, cities etc.	n/a	£29
4.8Mb of wedding images for cards, invites etc.	£59	£29
3Mb of women's heads in various activities	£59	£29
3.2Mb of EPSF files of the UK with roads, railways, counties, cities etc.	£95	n/a
All the British Tourist Board Symbols as EPSF files	£89	n/a
Over 200 British Tourist Board Symbols	£49	n/a
9 shades of grey for each font. (per font)	£49	n/a
Watermark effect for Times, Helvetica & Symbol	£45	n/a
Watermark effect for all LW+ Fonts	£89	n/a
Adds Fractions (eg. 2/3) to Times, Helvetica & Symbol	£45	n/a
Adds Fractions to all LW+ Fonts	£89	n/a
50 forms in PICT, Superpaint or Pagomaker format	£49	£49

All Instant Art Graphics are also available for IBM & Compatibles  
Instant Art Sampler Disk: £5



We're not going to be undersold ... provide proof of a genuine better offer for any product listed here from anyone in the UK within 14 days of purchase and we'll refund the difference

# User Groups

## London Region

### ESSEX GROUP

CONTACT - Pat Bermingham Tel : 01279-251011  
VENUE - The Y.M.C.A., Victoria Road, Chelmsford  
MEETS - Third Friday of every month

### CROYDON APPLE USERS GROUP

CONTACT - Graham Attwood Tel : 01-8791-2211  
VENUE - 515, Limpfield Road, Warlingham, Surrey  
MEETS - 7.30pm on the third Thursday of every month

### HERTS & BEDS GROUP

CONTACT - Norah Arnold Tel : 01895-573411  
VENUE - The Old School, 1, Branch Road,  
Park Street Village, St Albans, Herts.  
MEETS - 8.00pm on the first Tuesday of each month

### KENT GROUP

CONTACT - Richard Daniels Tel : 01893-540144  
VENUE -  
MEETS - Contact Richard

### LONDON APPLE II GROUP

CONTACT - Chris Williams Tel : 011-4981-0211  
VENUE -  
MEETS - Contact Chris

### LONDON MACINTOSH GROUP

CONTACT - Maureen de Saxe Tel : 011-4971-4444  
VENUE - Room 683, London University Institute of  
Education, Bedford Way, London, WC1  
MEETS - 6.00pm on the second Tuesday of every  
month.

### M25 BUSINESS MAC GROUP

CONTACT - Jim Panks Tel : 01753-611444  
VENUE - Sir Mark Collett Pavilion, Heaverham Road,  
Kemsing, Sevenoaks, Kent  
MEETS - Phone Jim for details

### SOUTH EAST ESSEX MAC GROUP

CONTACT - Mick Foy Tel : 01702-880011  
VENUE - D.P.S. Acorn House, Little Oaks, Basildon,  
Essex  
MEETS - First Monday of each month

## South

### POOLE MACINTOSH USER GROUP

CONTACT - David Huckle Tel : 01202-574411  
VENUE - Deverill Computers (dealer)  
Ittec House, 34-40 West Street, Poole, Dorset  
BH15 1LA  
MEETS - Four times a year

### SOUTHAMPTON

CONTACT - Geoff Parson Tel : 0703-571111 (work)  
Tel : 0703-522457  
(home)  
VENUE - Contact Geoff for details

## Wales and West

### BRISTOL GROUP (B.A.U.D.)

CONTACT - Colin Rogers Tel : 0274-242411 (work)  
Tel : 0274-414071

(home)

VENUE - Decimal Business Machines  
Three Queens Lane, Redcliffe  
MEETS - 7th day of each month, or the Friday nearest  
to it if the 7th falls on a Saturday or Sunday

### LIANTS & BERKS GROUP

CONTACT - Joe Cade Tel : 0494-674117  
VENUE - Thames Valley Systems (Apple Dealer),  
128 High Street, Maidenhead, Berkshire,  
SL6 1PT Tel 0628-25361  
MEETS - 7.00pm on the second Monday of every month

### MACTAFF - SOUTH WALES MAC GROUP

CONTACT -  
VENUE - Apple Centre South Wales, Longcross Court  
47 Newport Road, Cardiff  
MEETS - Contact Apple Centre

## Midlands

### CAMBRIDGE APPLE USERS GROUP

CONTACT - || Ian Archibald Tel : 0223-311157  
Mac Richard Boyd Tel : 0223-344767  
VENUE - Parish Hall of St Mark's Church, Barton Road  
Cambridge  
MEETS - Fortnightly alternating between Mac and  
Apple II

### EAST MIDLANDS MAC USER GROUP

CONTACT - Nick Helm Tel : 0533-240753  
VENUE - Wilford Cricket & Rugby Club, Nottingham  
MEETS - 8.00pm on the first and third Wednesday of  
every month.

### GATEWAY COMPUTER CLUB

CONTACT - Vern Tel : 01553-820111  
Robin Boyd Tel : 01553-820767  
VENUE - Bob Hope Recreation Centre, R.A.F Mildenhall  
MEETS - AMS conference room, Mildenhall base.  
Normally at weekends, check with Robin  
NOTE : Although the venue is on a service  
base it is not in a security restricted area so  
the club is open to interested parties.



## LEICESTER GROUP

CONTACT - Bob Bown Tel : (01533) 417515  
VENUE - Shakespeare Pub, Braunstone Lane,  
Leicester  
MEETS - 7.30pm to 10.0pm on the first Wednesday of  
every month

## LIVERPOOL GROUP

CONTACT - Irene Flaxman Tel : (0151) 43401-43437  
VENUE - Check with Irene  
MEETS - Second Monday of every month.

## MIDAPPLE

CONTACT - Tom Wright Tel : (01577) 575100  
VENUE - I.T.E.C., Tildasley Street, West Bromwich,  
West Midlands  
MEETS - 7.00pm on the second Friday of every month

## THE MIDLAND MAC GROUP

CONTACT - Ivan Knezovich Tel : (01203) 401341  
VENUE - Spring Grove House, West Midland Safari  
Park, Bewdley, Worcestershire.  
MEETS - 8.00pm on the first Tuesday of every month

## WEST MIDLANDS AMATEUR COMPUTER CLUB

CONTACT - John Tracey Tel : (0121) 770027  
VENUE - Hill Crest School, Simms Lane, Netherton,  
Near Dudley.  
MEETS - 7.00pm on the second and fourth Thursdays  
of each month.  
NOTE - - This is not an Apple user club, it is a  
general interest club which welcomes users of  
all machines. There are currently two Apple  
user members.

## North

### BURNLEY APPLE USER GROUP

CONTACT - Rod Turnough Tel : (0773) 771231  
VENUE - Michelin Sports Centre  
MEETS - 2nd Wednesday of each month

### CREW COMPUTER USER CLUB

CONTACT - Paul Edmonds  
VENUE - Christ Church Hall, Crewe  
MEETS - Fortnightly, Fridays, 7.30pm to 10.00pm  
NOTE: this is a general interest group with  
Apple users among its members

### HARROGATE AREA

CONTACT - Peter Sutton Tel : (01937) 417711  
No active organised group in this area but there  
are a number of keen Apple users in contact with  
each other.

### THE NORTH EAST APPLE COMPUTER CLUB

CONTACT - Philip Dixon Tel : (0191) 516111  
VENUE - Apple Centre North East, Ponteland Road,  
Ponteland, Newcastle-on-Tyne  
MEETS - First Wednesday of every month

### THE NORTH WEST APPLE COMPUTER CLUB

CONTACT -  
VENUE - Horse & Jockey Pub., Winwick Road,  
Warrington  
MEETS - First Monday of every month

## THE NORTH WEST APPLE USERS GROUP

CONTACT - Max Parrot  
Tel : (061) 276-2311, (061) 276-2312  
Tel : (061) 276-2313  
VENUE -  
MEETS - Ring Max

## Scotland

### EDINBURGH GROUP

CONTACT - Ricky Pollock Tel : (011) 4577-4774  
VENUE -  
MEETS - Meetings monthly, check with Ricky

## Postal

### APPLE II PROGRAMMERS CLUB

CONTACT - Philip Dixon TEL : (0191) 460111  
VENUE - None established yet  
MEETS - No meetings yet, has operated through  
postal newsletter published quarterly  
NOTE : Philip started the club some time ago based  
on a membership fee of #1.00 to cover the cost of  
newsletters. Original intention was to concentrate  
on BASIC and Assembler programming.

## New Groups

### DORCHESTER

CONTACT - Ron Hoare Tel : (01223) 411111  
VENUE -  
MEETS - Contact Ron

### ORPINGTON COMPUTER CLUB

CONTACT - Terry Wheeler Tel : (01892) 441111  
VENUE - G.E.A. Hall, Woodhurst Avenue, Petworth  
MEETS - Contact Terry

### DONCASTER SOUTH YORKSHIRE

CONTACT - Colin Withington Tel : (01924) 511111  
VENUE -  
MEETS - Contact Colin

### LEEDS

CONTACT - Bob Miller Tel : (0113) 276111  
- T Velupillai Tel : (0113) 276111  
VENUE -  
MEETS - Contact Bob

**If you want to start a group, find out about a  
group that might be near you, please write or  
contact John Lee the Local Group Organiser at  
the PO Box in Liverpool, or phone John Lee on  
0151 43401.**

**If you are a local group organiser and have not  
been in touch with John Lee, please contact  
John with details of your group, or any  
changes there may be to the above details.**

# Mac Library

## New MacLibrary Catalogue

With this copy of Apple2000 you will have received a new MacLibrary Catalogue, that is, if you have registered as a Macintosh user. In the event of you being a Macintosh owner who has not received a new catalogue, please notify Apple2000 of the machine which you are currently using so that our records can be updated and a copy of the new catalogue sent to you.

Please note that this new catalogue now replaces the old one completely. In future, please use the new catalogue for ordering. As time goes on any new disks will be described in the magazine, month by month, in the usual way. Do not forget that all previous update disks have been withdrawn and their contents added into the new catalogue. In time a new set of update disks will be issued.

## Stuffed files

From now on it seems more likely that lack of disk space may make



it necessary to place archived files on the MacLibrary disks. These are

files which have been compressed to make them take up a smaller amount of disk space. The program which is used to compress the files is called Stuffit and its icon looks like the one above. The Stuffit icon used to look slightly different on earlier



versions. The program which can be used to decompress

the files is called UnStuffit, although Stuffit itself will also decompress files.

The compressed or archived files themselves can always be spotted because they have the suffix .sit or .SIT. Earlier versions will have a different icon but the



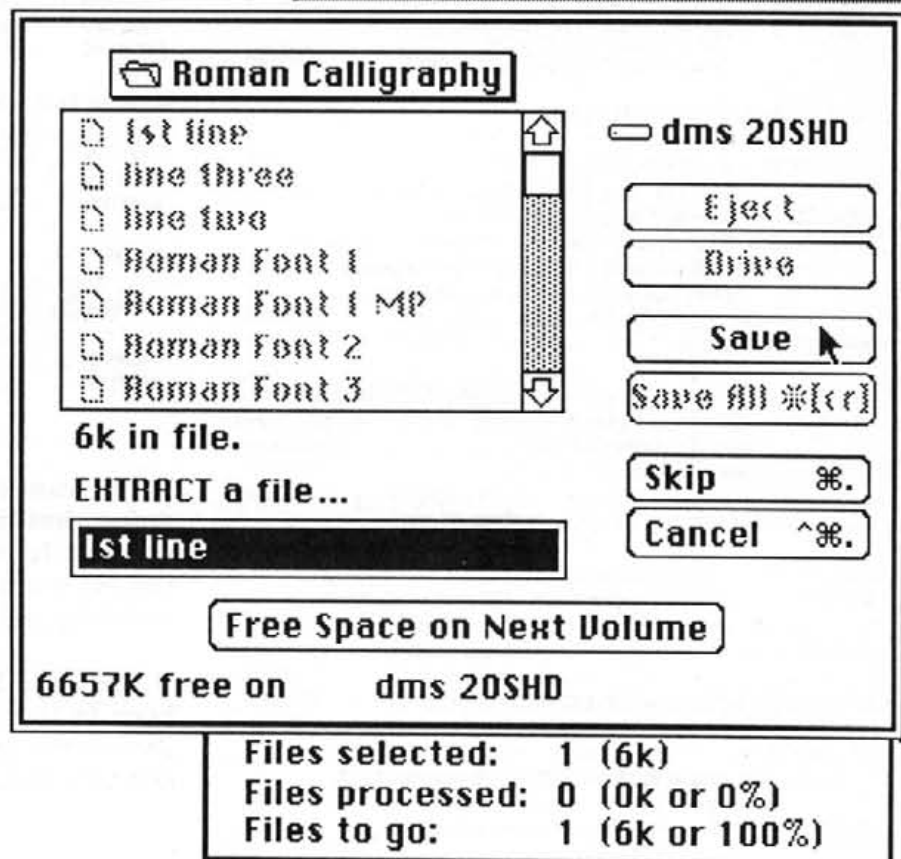
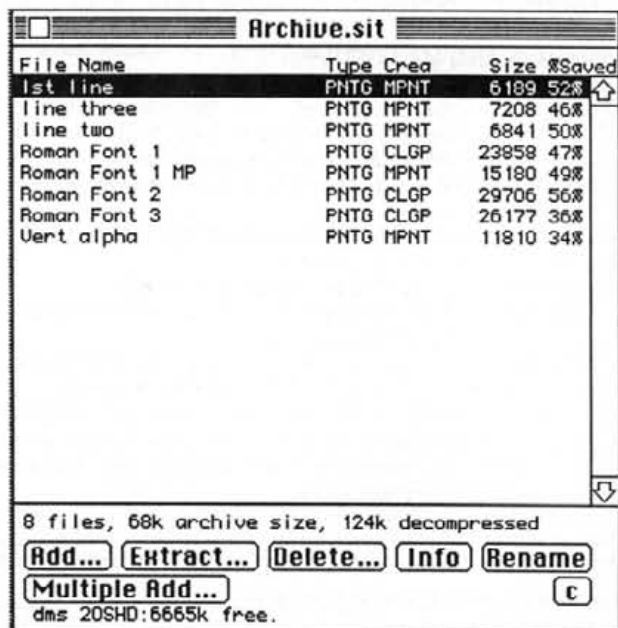
Archive.sit

suffix will be the same. Normally the UnStuffit program will be on any library disk containing com-

pressed files and so all you need to do is to copy the .sit file and the UnStuffit program to your own disk and then double-click on the .sit file. The UnStuffit program will open automatically and you will see a window like the one just below on the right. The window shows all the original files that have been stored in this archive file. You will be able to see the file's name, type, creator, original size and the percentage by which it was compressed.

If you click on one of the file names the buttons along the bottom of the window become active. The 'Extract' button is the one to click on next, and this will cause a dialog box like the one below to appear. Those users with only one disk drive will need to use

the 'Eject' button to insert a new disk at this point. When you are ready with a suitable disk and filename just click 'Save' and that is all there is to using UnStuffit. UnStuffit may be used free for unstuffing but if you use Stuffit for compressing files please pay \$20 to author Raymond Lau.





Members' Small Adverts are FREE.  
Please help us to help you. Send your advertisements to us on a disk, in Mac or Apple II text format. We will return the disk, of course. This saves us time, and avoids errors.

# Members' Small Ads

Members' Small Adverts are FREE.  
We reserve the right to edit and or omit them. They are placed in this Magazine in good faith. Apple2000 holds no responsibility over items advertised, and buyers purchase at their own risk.

**WARNING: The sale of copied or pirated software is illegal.  
Please ensure that items offered for sale are new or are re**

## PROGRAMMER REQUIRED FOR APPLE II/e

I have four educational programs in BBC Basic. I will pay someone to re-write them for the Apple II/e. He/she must be able to create good graphics.

If interested, 'phone John Naylor on ... 041-334 4988

## FOR SALE

Software for sale, all original c/w manual etc. All prices include P&P. Numerous packages for sale - we have listed only a few, here. Any order for 10 games gets a choice of an extra game FREE (providing it has not already been sold). But that game for Christmas you always wanted - now, while stocks last. No. I am not a dealer. Examples:-

Apple Panic...£3 Beer Run .....£3 Crossfire .....£3  
Cyber Strike...£3 Dark Forest.....£4 Dig Dug .....£3  
Epoch .....£3 Firebug .....£3 Flight Sim. II ...£8  
German Whist...£3 Gorgon .....£3 Hadron .....£3  
Jaw Breaker...£3 Jellyfish .....£3 Labyrinth .....£3  
Pinball Arcade...£3 Sargon III .....£8 Suspended .....£5  
Bard's Tale...£5 VC .....£5 Zaxxon .....£3

Telephone Peter Wilson on ..... 041-334 4988

## WANTED

CPM Pseudodisc Software for Vergecourt Ramex 128 card  
Apple 2+ power supply

Telephone Dr F G Marshall on ..... 041-334 4988

## FOR SALE

Mannesman Tally Spirit 80 Dot-Matrix Printer (with manual) .....£80 o.n.o.  
Fujitsu 120-column High Resolution Parallel/Serial Dot-Matrix Printer - ideal for use with IBM or other PC, as almost new (with users manual) .....£250 o.n.o.  
Acoustic Coupler Modem (with power pack) ...£60 o.n.o.  
Omnis 2 (with manual) //e-compatible .....£100 o.n.o.  
Omnis 3 (with manual) //e-compatible .....£180 o.n.o.  
**OR THE LOT FOR .....£400**  
Will consider exchange/part-exchange for hardware/software/peripherals sought for //e(Enhanced), e.g. hard disk card; hard disk; 3.5" unidisk drive with card, etc.; Thunderscan; colour monitor with card

Telephone Gordon Owen on ..... 041-334 4988

## WANTED

Sup 'R' Terminal 80-column card for Apple II+  
'Phone Remo Nannetti (after 6 pm) on 041-334 4988

## FOR SALE

Apple IIGS Software  
All in original packaging with manuals:  
Music Studio .....£25.00  
Paintworks Plus .....£25.00  
Deluxe Paint with Clip Art .....£50.00  
Hacker II .....£15.00  
Shanghai .....£15.00  
**OR THE LOT FOR .....£100.00**

Telephone John Beattie on ..... 041-334 4988

## FOR SALE

### Desktop Publishing Bargain

Macintosh Plus with 2.5M RAM  
HD20 Hard Disk  
Megascreeen II 19" Screen  
Imagewriter II  
**The full system .....£3,000**  
All the above equipment (total value well over £6,000) is offered for sale second hand, by an Apple2000 member seeking a quick cash deal to prop up planned investment in a Mac IIX. The equipment is in full working order and immediately available for collection (or can be delivered to a purchaser within reasonable distance of Liverpool).

Telephone Brian Appleton on ..... 041-334 4988

## FOR SALE

Apple 2+ clone, Z80 CPU, 80-Column card, two disk drives plus card, monitor, software (including Wordstar, Dbase II, Supercalc) .....£250 o.n.o.

Apple 2e clone, Z80 CPU and 64K/80-Column card, two disk drives plus card, monitor, Grappler card, Epson FX-100 clone, software (including Wordstar, Dbase II, Supercalc, Appleworks) .....£350 o.n.o.  
Offers welcome. Quick sale wanted.

Telephone Alex Bermingham on ..... 041-334 4988

## FOR SALE

ThunderScan Image Digitiser for Imagewriter II Printer + Mac Software. Little used, perfect .....£100.

Sider 10MB Hard Disk For Apple II range.  
Partitioned for CP/M / DOS / ProDos / Pascal.  
Perfect Condition. Complete .....£320

Telephone R J Cannon ..... 0794-61410

## FOR SALE

Apple II Europlus with single disk drive  
Kaga mono monitor  
Parallel printer and 80 col. cards with Inverse chip  
16K ram card (total 64K)  
Joystick and set of paddles  
TV modulator with Euro colour card  
All manuals and other books  
Format 80 Enhanced WP package  
Visicalc and approx. 20 disks in box  
Deadline mystery and escape games  
Flight simulator and other software  
The lot .....£145(o.n.o.)

Telephone Dirk Blanken on ..... 041-334 4988  
or at Weybridge, on ..... 041-334 4988

## FOR SALE

Apple II Europlus + Monitor & Card  
2 disk drives + interface card  
Serial Printer card  
Dos 3.3 disk & manual  
5 Utility & Games disks

Offers to Del Stevanato ..... 041-334 4988

Members' Small Adverts are FREE.  
Please help us to help you. Send your advertisements to us on a disk, in Mac or Apple II text format. We will return the disk, of course. This saves us time, and avoids errors.

## Members' Small Ads

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**WARNING: The sale of copied or pirated software is illegal.  
Please ensure that items offered for sale are new or are re-registered.**

### FOR SALE

Apple /// 128K and Apple /// Monitor

OR

Apple /// 256K with Apple /// monitor, external disc drive, 5Mb profile, dot matrix printer and software including VisiCalc ///, Apple Writer ///, Quickfile ///, Business Graphics ///, Catalyst 1, 3EZ Pieces and Utilities.

Offers to Geoff Wood ..... 01-497-3805

### FOR SALE

2nd hand SIMMS, 100 Nsec, 2 Mbyte ..... £450

Telephone Richard on ..... 0473-334461

### FOR SALE

Apple II graphics programmer selling up!

**Hardware:** Apple Graphics Tablet; Robostik drafting/drawing controller and program 1.2. Offers?

**Programs:** Apple UCSD Pascal, Microsoft Applesoft compiler, Applewriter I and II wordprocessors, Apple Doc, Graforth (all with manuals). Offers?

**Books:** Programming the 6502; Computer graphics primer; Apple interfacing; Assembly lines (Intro to assembler programming); Apple assembly language course; Graphically speaking; Applesoft Datafile programming; What's Where in the Apple II; Enhancing your Apple II; All about DOS; All about Pascal. Offers for the books as one lot, including postage?

Telephone Gillian (evenings) ..... 01-497-4709

### FOR SALE

MACINTOSH PLUS computer with security kit £990. 800K external drive £190. Imagewriter I printer and connection kit £235. Latest MacWrite w/p program unused £50. All prices excluding VAT.

Telephone Gillian (evenings) ..... 01-497-4709

### FOR SALE

Apple II Europlus, twin drives, monitor, comms. card, serial card, language card, printer cards, about 100 disks, Pascal and Basic compilers, statistics software, complete with all manuals ..... £250 (o.n.o.)

Telephone G. B. Chaplin on ..... 0433-78119

### FOR SALE

Complete Apple ///e - CPM system with full suite of games and business software including:-

Enhanced Apple///e	2 5.25" drives plus controller
CPM Star Card	800K 3.5" drive plus controller
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Copies of "Apple User" From March 1983 to the end, earlier this year. An excellent way to learn about your Apple.

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# No matter which Mac you've got, we'll make it work faster.

You want more speed from your Mac. Less time waiting, more time working. Now your dream is reality whether you've a new MacII or a 128K of legend.

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Run your SE with MacII performance by slotting in the Turbo SE. Everything runs at least twice as fast; faster than many 68020 designs. A big screen attaches, and the 68881 maths co-processor option runs spreadsheets 60 to 100 times faster (and other programs using SANE).

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**I love my 512K...**

case- the SCSI port exits from the battery compartment.

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## Think 'n Time

New

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You create, open, close, collapse, expand and rearrange sheets and piles, all with point and click ease.

Drag sheets or piles to a new position in the tree to reorganize a subject. T'nT links text information to dates and times and numeric values in a completely integrated manner. It's handy for everything from project management to remembering important appointments and birthdays.

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Integrated date and time management functions provide an easy way to plan your personal and business activities. T'nT allows you to more effectively plan, schedule, organize, arrange, delegate, direct, control, monitor and analyze your work.

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A desk accessory, T'nT is always available for taking down information and accessing ideas, dates, notes and data, eliminating slips of paper.

Think 'n Time ..... £84.95



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Fast, Clear Charts.

New Version

Simply drag chart objects into place and connect them with flow lines. Draw flowcharts up to ten times faster than with drawing programs or pen and pencil. Enter text into symbols, lines and labels with ease.

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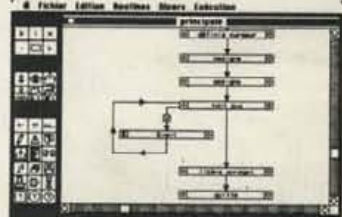
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